

INTERNATIONAL ASTRONOMICAL UNION

COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)

DOUBLE STARS INFORMATION CIRCULAR No. 212 (FEBRUARY 2024)

NEW ORBITS

WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.
00024+1047 190	A 1249AB 17180	58.86 ± 1.25	2002.91 ± 0.55	0.8058 ± 0.0218	0.2004 ± 0.0031	110.6 ± 1.4	66.4 ± 2.2	18.6 ± 5.9	243.2 0.338 242.8 0.342	TOK 2017.680
00026+1841 201	HDS 2Aa,Ab –	22.68 ± 0.34	2020.967 ± 0.074	0.6313 ± 0.0130	0.1106 ± 0.0028	59.8 ± 1.3	17.4 ± 2.3	302.2 ± 3.1	66.7 0.063 85.3 0.065	TOK 2023.571
00061+0943 510	HDS 7 –	51.24 ± 1.11	2003.830 ± 0.106	0.5340 ± 0.0136	0.2145 ± 0.0032	60.0 ± 0.9	184.1 ± 1.1	237.1 ± 2.1	209.1 0.257 211.2 0.252	TOK 2023.738
00098–3347 794	SEE 3 –	295.6 ± 8.6	1978.66 ± 0.48	0.7698 ± 0.0085	0.9284 ± 0.0200	33.1 ± 2.0	274.3 ± 3.4	72.5 ± 3.4	127.6 0.977 128.2 0.988	TOK 2023.896
00143–2732 1144	HDS 33 –	10.150 ± 0.016	2013.465 ± 0.0167	0.6084 ± 0.0036	0.1222 ± 0.0010	27.6 ± 1.1	33.3 ± 2.7	82.5 ± 2.4	179.8 0.057 235.6 0.112	TOK 2023.896
00304–6236 –	JNN 296Aa,Ab –	30.0 ...	2016.88 ...	0.434 ...	0.202 ...	132.2 ...	95.9 ...	41.1 ...	280.7 0.230 275.4 0.245	TOK 2024.019
00321–1218 2532	HDS 71 –	62.2 ...	2035.84 ...	0.216 ...	0.273 ...	131.5 ...	124.9 ...	320.2 ...	269.7 0.221 263.6 0.206	TOK 2023.006
01017+2518 4809	HDS 134 –	16.563 ± 0.056	2015.209 ± 0.070	0.3959 ± 0.0117	0.1303 ± 0.0017	59.0 ± 0.7	237.1 ± 0.7	288.0 ± 0.6	6.9 0.112 19.4 0.124	TOK 2023.571
01048+0135 5064	A 2310 884	160.6 ± 11.1	1936.3 ± 4.0	0.471 ± 0.039	0.2242 ± 0.0070	114.7 ± 2.8	136.5 ± 3.0	8.4 ± 14.1	310.0 0.318 309.6 0.317	TOK 2017.825
01150–0908 –	GKM Aa,Ab –	3.085 ...	2022.403 ...	0.397 ...	0.041 ...	51.5 ...	110.5 ...	260.2 ...	189.6 0.036 275.7 0.036	TOK 2023.897
01158–6853 5842	I 27CD –	85.137 ± 0.213	2001.25 ± 0.91	0.0396 ± 0.0024	1.0877 ± 0.0054	31.1 ± 0.3	140.6 ± 0.9	132.7 ± 3.3	9.5 0.996 13.9 0.988	TOK 2024.019
01245–2519 6581	B 18 1127	300 ...	2140.66 ...	0.90 ...	0.470 ...	79.1 ...	48.9 ...	89.4 ...	340.7 0.176 341.4 0.176	TOK 2023.571

NEW ORBITS (continuation)											
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.	
01246+4310 6583	A 3001 1120	159.6 ± 13.1	1979.32 ± 0.91	0.940 ± 0.000	0.577 ± 0.043	127.4 ± 5.9	128.6 ± 5.7	243.8 ± 4.9	86.7 86.4	0.735 0.739	TOK 2016.000
01406+0846 7618	TOK 872 –	5.979 ± 0.026	2004.6004 ± 0.0045	0.7096 ± 0.0059	0.0770 ± 0.0025	60.3 ± 2.0	122.9 ± 2.6	245.6 ± 0.8	145.5 161.1	0.088 0.087	TOK+RV 2023.896
01497–1022 8509	BU 1168 1454	121.0 ± 3.5	1924.6 ± 3.5	0.700 ± 0.000	0.2949 ± 0.0119	94.9 ± 0.6	205.5 ± 0.7	106.8 ± 2.5	209.0 208.8	0.276 0.274	TOK 2023.896
01503–8714 8550	HDS 247 –	100 ...	2030.11 ...	0.355 ...	0.206 ...	115.4 ...	90.8 ...	92.5 ...	66.9 61.3	0.110 0.098	TOK 2023.910
02035–0455 9603	TOK 873 –	20.0 ...	2019.042 ...	0.111 ...	0.230 ...	28.3 ...	51.8 ...	196.8 ...	353.7 11.1	0.212 0.227	TOK 2023.571
02143–4952 10421	TOK 815 –	9.2 ...	2017.40 ...	0.30 ...	0.145 ...	78.0 ...	273.4 ...	111.7 ...	269.1 276.5	0.155 0.132	TOK 2023.664
02149–0639 10467	HDS 298 –	59.5 ...	2019.47 ...	0.90 ...	0.090 ...	134.0 ...	184.8 ...	233.0 ...	169.7 167.0	0.070 0.079	TOK 2023.571
02166–5026 10611	TOK 185 –	10.572 ± 0.062	2012.51 ± 0.80	0.0227 ± 0.0071	0.0907 ± 0.0025	47.1 ± 1.4	266.6 ± 2.2	338.9 ± 27.3	274.6 302.4	0.088 0.076	TOK 2023.664
02167+0632 10616	YSC 20 –	13.291 ± 0.045	2010.630 ± 0.053	0.4182 ± 0.0082	0.1254 ± 0.0021	27.4 ± 3.8	45.9 ± 6.6	31.2 ± 7.0	79.7 146.2	0.070 0.080	TOK 2024.019
02297–0216 11606	BU 519 1900	1000 ...	2033.68 ...	0.80 ...	1.028 ...	64.9 ...	80.5 ...	104.5 ...	114.0 118.5	0.155 0.141	TOK 2023.571
02370–3056 12192	RST2283 –	143.1 ...	1906.42 ...	0.50 ...	0.276 ...	53.8 ...	33.8 ...	54.0 ...	337.7 340.5	0.187 0.187	TOK 2023.006
02405–2408 12465	SEE 19 2044	307.2 ± 24.4	2016.762 ± 0.048	0.8323 ± 0.0087	0.3794 ± 0.0197	148.0 ± 1.4	235.5 ± 2.7	81.6 ± 3.1	57.0 52.6	0.129 0.140	TOK 2022.611
02415–1506 12554	HDS 351 –	42.7 ± 6.0	1979.8 ± 6.5	0.374 ± 0.041	0.2413 ± 0.0252	88.8 ± 0.4	24.2 ± 0.5	294.6 ± 17.0	23.3 23.8	0.126 0.157	TOK 2023.664
03309–6200 16370	TOK 190 –	3.6268 ± 0.0106	2021.0809 ± 0.0272	0.4454 ± 0.0227	0.0637 ± 0.0011	79.2 ± 0.8	30.4 ± 0.8	242.5 ± 1.8	193.2 19.4	0.036 0.032	TOK 2023.664
03571–0828 –	RST4764 –	200 ...	1995.3 ...	0.243 ...	0.227 ...	124.7 ...	155.9 ...	353.9 ...	96.4 93.2	0.127 0.126	TOK 2023.571

NEW ORBITS (continuation)											
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.	
04021–3429 18824	BU 1004AB –	446 ± 105	2049.4 ± 12.0	0.360 ± 0.048	1.591 ± 0.245	155.0 ± 10.6	66.8 ± 13.2	71.5 ± 15.6	41.8 1.080 40.3 1.072	TOK 2024.069	
04123+0939 –	STT 74 3053	113.0 ± 2.1	1996.79 ± 0.83	0.914 ± 0.017	0.329 ± 0.014	108.6 ± 3.2	111.1 ± 2.4	16.9 ± 7.4	289.5 0.512 289.3 0.520	ALZ 2024.07	
04224+1118 20419	PAT 5 –	3.0490 ± 0.0137	2024.179 ± 0.105	0.162 ± 0.032	0.0508 ± 0.0020	32.9 ± 9.4	121.4 ± 9.5	124.6 ± 11.3	217.7 0.036 356.1 0.047	TOK 2023.897	
04279+2427 20834	TOK 877 –	10.94 ± 0.99	2015.148 ± 0.249	0.192 ± 0.089	0.1556 ± 0.0114	63.1 ± 3.1	85.9 ± 3.4	221.1 ± 10.4	237.9 0.110 261.1 0.132	TOK 2023.897	
04506+1505 22505	CHR 20 –	5.7383 ± 0.0060	2003.825 ± 0.085	0.0480 ± 0.0099	0.0890 ± 0.0010	113.2 ± 0.6	129.7 ± 0.7	270.5 ± 5.2	25.5 0.038 320.6 0.083	TOK 2023.897	
04550+1436 22853	HDS 634 –	48.3 ...	2013.03 ...	0.527 ...	0.101 ...	160.0 ...	61.4 ...	103.5 ...	181.9 0.114 177.4 0.118	TOK 2022.683	
05005+0506 23177	STT 93 3596	3200 ...	1913.6 ...	0.80 ...	4.108 ...	100.3 ...	60.6 ...	65.5 ...	242.9 1.727 242.8 1.740	TOK 2024.069	
05085–2102 –	YMG 9 –	4.397 ± 0.132	2021.37 ± 0.87	0.0306 ± 0.0173	0.0483 ± 0.0029	71.4 ± 2.6	120.5 ± 1.7	171.2 ± 71.9	128.7 0.046 250.4 0.019	TOK 2024.020	
05286–4548 25641	HDS 723 –	80 ...	2016.917 ...	0.937 ...	0.157 ...	114.4 ...	148.5 ...	135.0 ...	192.8 0.079 190.5 0.088	TOK 2023.913	
05288–4001 25658	B 1483 –	125.0 ...	2003.95 ...	0.575 ...	0.426 ...	79.7 ...	186.6 ...	120.0 ...	28.2 0.190 30.4 0.181	TOK 2022.845	
05289–0318 25667	DA 6 4078	1800 ...	1995.86 ...	0.86 ...	1.092 ...	46.9 ...	68.8 ...	167.6 ...	322.1 0.201 324.1 0.204	TOK 2023.897	
05301–3228 –	B 1946 –	67.2 ± 4.0	2023.239 ± 0.073	0.7757 ± 0.0082	0.1140 ± 0.0014	34.9 ± 4.2	180.2 ± 5.5	358.7 ± 7.5	219.5 0.027 259.9 0.034	TOK 2023.913	
05321–0305 –	JNN 39Aa,Ab –	150 fixed	2019.445 ± 0.026	0.8586 ± 0.0013	0.7899 ± 0.0060	66.5 ± 0.3	132.8 ± 0.5	44.8 ± 0.6	304.5 0.309 307.2 0.365	TOK 2023.897	
05321–0305 –	V1311Ori Ba,Bb –	7.795 ...	2022.159 ...	0.000 ...	0.080 ...	31.8 ...	75.9 ...	0.0 ...	160.1 0.068 211.8 0.074	TOK 2023.897	
05418–5000 26830	HU 1568 –	320 ...	2019.19 ...	0.327 ...	1.028 ...	109.8 ...	174.4 ...	70.3 ...	108.0 0.255 101.9 0.246	TOK 2023.913	

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WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.	
05427–6708 26904	I 745 –	205 ±35	2017.702 ±0.183	0.7856 ±0.0243	0.542 ±0.061	75.4 ±0.7	244.9 ±0.8	205.7 ±1.5	220.0 0.113 225.0 0.143	TOK 2023.910	
06236+1739 30400	A 2517 5002	300 ...	1969.49 ...	0.372 ...	0.187 ...	105.5 ...	26.7 ...	139.0 ...	173.5 0.082 172.0 0.080	TOK 2024.020	
06481–0948 –	A 1056 5464	113.6 ±3.7	1995.91 ±0.65	0.712 ±0.047	0.4049 ±0.0219	78.5 ±0.0	70.4 ±1.5	257.8 ±1.5	85.1 0.351 85.7 0.349	TOK 2023.897	
07015–0942 –	A 3042AB 5707	97.07 ±1.48	2007.689 ±0.074	0.6081 ±0.0062	0.2840 ±0.0028	48.3 ±0.9	222.8 ±0.9	117.0 ±0.9	102.1 0.216 105.4 0.220	TOK 2021.078	
07374–3458 37096	FIN 324AC –	78.58 ±0.72	2016.7719 ±0.0214	0.6559 ±0.0023	0.3208 ±0.0023	153.3 ±0.7	71.8 ±1.7	205.7 ±1.6	111.1 0.230 105.6 0.252	TOK 2023.179	
07427–3510 37578	HDS1091 –	59.2 ±14.9	2025.27 ±1.70	0.399 ±0.038	0.1137 ±0.0200	126.4 ±6.8	78.2 ±6.4	262.1 ±22.8	209.0 0.049 187.9 0.042	TOK 2024.020	
07558+1320 38730	YSC 199 –	54.8 ...	2008.175 ...	0.0 ...	0.152 ...	117.8 ...	121.4 ...	0.0 ...	3.3 0.078 352.6 0.085	TOK 2023.897	
07584–1501 38969	TOK 882 –	15.94 ±0.99	2020.280 ±0.033	0.4367 ±0.0250	0.2095 ±0.0090	53.6 ±1.0	194.0 ±1.5	6.5 ±1.4	345.4 0.199 356.2 0.244	TOK 2023.897	
08134–4534 40269	TOK 832 –	9.67 ...	2018.99 ...	0.0 ...	0.041 ...	108.5 ...	183.7 ...	0.0 ...	1.6 0.041 346.8 0.031	TOK 2023.910	
08277–0425 41489	A 550 6825	21.061 ±0.051	2002.582 ±0.069	0.8443 ±0.0095	0.0939 ±0.0027	150.5 ±3.8	34.5 ±8.2	47.8 ±8.3	255.4 0.024 213.4 0.064	TOK 2023.897	
08313–0601 41802	BAG 49Aa,Ab –	16.428 ±0.130	2007.596 ±0.136	0.718 ±0.046	0.2467 ±0.0206	72.7 ±1.9	122.0 ±2.3	253.6 ±1.8	339.5 0.032 121.3 0.145	TOK 2023.897	
08375–5336 –	GKM Aa,Ab –	2.899 ±0.214	2023.127 ±0.046	0.496 ±0.048	0.0520 ±0.0025	41.7 ±8.7	66.4 ±7.3	199.9 ±10.9	58.7 0.068 99.6 0.065	TOK 2023.910	
08437–2442 –	B 165 6961	300 ...	2125.04 ...	0.50 ...	0.518 ...	76.3 ...	34.6 ...	119.3 ...	24.5 0.582 24.7 0.584	TOK 2016.960	
08476+0001 43167	RST5306Ca,Cb –	300 ...	1998.074 ...	0.43 ...	0.307 ...	80.8 ...	28.3 ...	60.2 ...	198.5 0.154 199.2 0.162	TOK 2022.047	
09033–7036 44445	HEI 223AB –	21.88 ...	2023.22 ...	0.206 ...	0.086 ...	109.2 ...	88.4 ...	301.2 ...	103.3 0.056 93.4 0.070	TOK 2023.179	

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09095–5538 –	YMG 29 –	12.0 fixed	2025.41 ±0.70	0.124 ±0.055	0.0478 ±0.0014	39.4 ±3.8	157.2 ±11.3	212.9 ±10.4	321.5 0.043 350.6 0.041	TOK 2023.910	
09118–4218 45139	HDS1332 –	68.1 ...	2015.06 ...	0.328 ...	0.262 ...	118.1 ...	25.8 ...	134.6 ...	186.0 0.189 181.4 0.184	TOK 2022.857	
09133–5529 –	ELP 24 –	33.2 ±10.2	2021.416 ±0.162	0.806 ±0.045	0.0949 ±0.0176	150.5 ±7.0	124.8 ±25.9	163.3 ±27.5	187.0 0.064 177.2 0.080	TOK 2023.910	
09434–4903 –	I 1188AB –	241.2 ...	2004.66 ...	0.85 ...	0.302 ...	62.0 ...	108.8 ...	104.1 ...	332.9 0.146 334.5 0.148	TOK 2022.444	
09477+2036 48051	COU 284 –	133.9 ...	2068.3 ...	0.88 ...	0.401 ...	96.7 ...	94.3 ...	265.9 ...	330.3 0.098 327.9 0.100	TOK 2023.105	
09567–5505 48758	FIN 150 –	174.5 ...	2038.36 ...	0.30 ...	0.147 ...	78.5 ...	64.8 ...	52.6 ...	64.6 0.114 65.2 0.112	TOK 2021.158	
10227–2350 –	B 197 7746	171.5 ±18.3	1986.73 ±0.77	0.6839 ±0.0251	0.2164 ±0.0101	20.0 ±0.0	134.3 ±41.2	212.6 ±43.3	135.4 0.277 136.3 0.280	TOK 2022.047	
10255–6504 51031	HDS1499 –	20.44 ±0.73	2022.053 ±0.055	0.7818 ±0.0105	0.0815 ±0.0019	36.4 ±3.8	130.1 ±4.7	132.9 ±5.4	35.4 0.055 50.1 0.072	TOK 2024.020	
10356–4715 –	GKM Aa,Ab –	1.499 ...	2016.643 ...	0.471 ...	0.022 ...	103.4 ...	83.5 ...	137.5 ...	64.6 0.010 91.5 0.028	TOK 2023.488	
10406–5342 –	FIN 40 –	300 ...	1927.11 ...	0.20 ...	0.349 ...	35.0 ...	146.8 ...	355.9 ...	282.8 0.351 283.7 0.353	TOK 2024.020	
10527+0029 53175	TOK 893BC –	32.76 ...	2001.454 ...	0.20 ...	0.242 ...	128.1 ...	180.9 ...	259.2 ...	39.1 0.210 30.7 0.220	TOK 2023.417	
11122–4616 54718	HDS1596 –	44.0 ±1.0	2021.86 ±0.43	0.3502 ±0.0065	0.2207 ±0.0043	61.7 ±1.2	91.6 ±1.4	175.0 ±5.2	288.4 0.134 299.3 0.121	TOK 2024.020	
11136–4749 54836	HDS1602 –	100 ...	2042.5 ...	0.40 ...	0.328 ...	84.2 ...	37.2 ...	15.6 ...	254.6 0.054 271.7 0.039	TOK 2024.020	
11238–3829 55628	CHR 241 –	3.5305 ±0.0094	2013.1822 ±0.0310	0.3798 ±0.0187	0.0582 ±0.0009	111.8 ±0.9	155.7 ±1.0	254.8 ±1.4	182.5 0.027 134.1 0.055	TOK 2023.009	
11272–1604 55884	HDS1627Aa,Ab –	47.47 ...	1998.772 ...	0.40 ...	0.264 ...	111.0 ...	86.0 ...	133.0 ...	103.7 0.288 101.7 0.299	TOK 2022.441	

NEW ORBITS (continuation)											
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a('') σ_a	i(°) σ_i	$\Omega(^{\circ})$ σ_{Ω}	$\omega(^{\circ})$ σ_{ω}	2024 2025	Author(s) Last obs.	
11430–3933 –	RST5358 –	151.85 ...	2035.744 ...	0.277 ...	0.147 ...	160.0 ...	168.2 ...	125.0 ...	92.6 0.108 88.6 0.107	TOK 2024.020	
11479–1528 57559	A 2380 8309	134.8 ...	2035.66 ...	0.95 ...	0.327 ...	95.0 ...	70.2 ...	245.7 ...	23.2 0.036 16.2 0.031	TOK 2024.020	
11585–7754 –	KOH 91 –	28.15 ...	2016.753 ...	0.534 ...	0.113 ...	70.1 ...	192.2 ...	147.9 ...	152.5 0.070 160.3 0.085	TOK 2024.020	
12018–3439 58669	I 215AB –	178.5 ± 4.5	2016.29 ± 0.43	0.4067 ± 0.0063	0.8619 ± 0.0145	111.3 ± 0.3	269.8 ± 0.3	268.4 ± 2.3	295.5 0.365 292.1 0.397	TOK+RV 2023.570	
12104–4352 59341	TOK 897 –	12.76 ± 0.69	2017.904 ± 0.050	0.5966 ± 0.0230	0.0630 ± 0.0025	50.2 ± 2.0	86.1 ± 3.3	101.8 ± 3.4	10.4 0.065 23.3 0.068	TOK 2023.010	
12141–3644 59659	SEE 147AB –	200 ...	1895.55 ...	0.381 ...	0.348 ...	53.5 ...	131.8 ...	69.4 ...	50.6 0.271 52.2 0.271	TOK 2022.447	
12175+0636 59916	BU 796 8500	172.1 ...	1980.85 ...	0.29 ...	0.326 ...	84.5 ...	94.4 ...	353.0 ...	262.6 0.150 263.4 0.161	TOK 2023.570	
12349–0509 61400	RST4502 –	223.5 ...	2006.343 ...	0.20 ...	0.226 ...	66.1 ...	63.6 ...	151.0 ...	249.0 0.185 250.0 0.184	TOK 2023.570	
12386–2704 –	BWL 32 –	17.85 ± 0.65	2019.996 ± 0.093	0.334 ± 0.016	0.2296 ± 0.0046	135.2 ± 1.6	188.5 ± 3.1	74.3 ± 5.7	359.4 0.240 347.7 0.250	TOK 2023.010	
12407–4803 61868	TOK 849 –	10.62 ...	2018.49 ...	0.50 ...	0.090 ...	15.3 ...	236.1 ...	180.0 ...	238.7 0.135 251.7 0.129	TOK 2023.010	
12419–6444 61559	HDS1779 –	44.91 ± 1.36	2019.930 ± 0.058	0.6386 ± 0.0097	0.1252 ± 0.0020	114.9 ± 1.0	31.2 ± 1.0	315.8 ± 1.8	350.2 0.054 335.6 0.052	TOK 2024.020	
13132–0501 64499	TOK 402 –	17.478 ± 0.297	2016.694 ± 0.016	0.5827 ± 0.0097	0.1534 ± 0.0014	111.2 ± 0.5	114.7 ± 0.4	254.4 ± 0.7	77.3 0.128 67.5 0.113	TOK 2023.570	
13377–2337 –	RST2856AB –	200 ...	2117.6 ...	0.046 ...	0.350 ...	79.9 ...	103.6 ...	15.6 ...	288.5 0.330 288.8 0.325	TOK 2023.324	
13513–2423 67620	WSI 77 –	10.4748 ± 0.0067	2009.2901 ± 0.0126	0.3385 ± 0.0021	0.2848 ± 0.0006	96.5 ± 0.1	171.6 ± 0.1	140.9 ± 0.4	181.6 0.203 176.8 0.297	TOK+RV 2023.324	
13514+2620 67623	YSC 50Aa,Ab –	40 ...	2027.29 ...	0.239 ...	0.238 ...	86.7 ...	216.4 ...	149.4 ...	21.0 0.041 29.5 0.081	TOK 2023.106	

NEW ORBITS (continuation)											
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.	
14219–3126 –	BWL 38 –	9.768 ± 0.147	2020.221 ± 0.093	0.371 ± 0.035	0.0997 ± 0.0029	106.0 ± 2.3	236.8 ± 1.9	287.0 ± 4.5	159.8 0.037 102.5 0.051	TOK 2023.105	
15071–0217 73982	A 689 9504	67.26 ± 0.92	1994.46 ± 0.41	0.6714 ± 0.0151	0.2194 ± 0.0032	107.4 ± 1.2	145.1 ± 0.8	12.6 ± 3.6	323.1 0.361 322.7 0.361	TOK 2023.570	
15367–4208 TOK –	408Ca,Cb –	7.970 ± 0.158	2014.410 ± 0.145	0.000 ± 0.000	0.0570 ± 0.0015	62.9 ± 5.1	102.0 ± 3.3	0.0 ± 0.0	158.4 0.030 241.8 0.035	TOK 2023.179	
15481–5811 –	SKF2839Aa,Ab –	11.11 ± 0.45	2023.7711 ± 0.0182	0.5653 ± 0.0152	0.1704 ± 0.0020	160.5 ± 6.8	14.3 ± 10.6	46.3 ± 8.4	297.5 0.074 220.2 0.136	TOK 2023.570	
16077–2125 79020	MCA 43 –	11.321 ± 0.105	2017.06 ± 0.68	0.399 ± 0.105	0.0476 ± 0.0030	81.6 ± 2.3	143.0 ± 1.7	199.9 ± 17.4	149.8 0.050 155.6 0.033	TOK 2023.180	
16094–3103 –	I 557 –	136.20 ± 3.50	2034.00 ± 0.80	0.7260 0.0015	0.6220 ± 0.0008	85.9 ± 1.0	26.4 ± 1.0	248.4 ± 2.5	202.1 0.293 202.7 0.293	D et al. 2019.614	
16120–1928 79374	CHR 146Aa,Ab –	10.033 ± 0.096	2014.133 ± 0.278	0.920 fixed	0.0994 ± 0.0102	90.1 ± 0.8	344.9 ± 2.3	108.4 ± 2.9	344.9 0.028 163.9 0.012	TOK 2023.324	
16161–3037 79706	I 1586 –	180 ...	2110.62 ...	0.13 ...	0.335 ...	154.6 ...	145.6 ...	133.4 ...	184.1 0.362 182.5 0.363	TOK 2023.180	
16488+1039 –	CRC 73 –	11.51 ± 0.38	2021.160 ± 0.256	0.1758 ± 0.0191	0.2002 ± 0.0055	71.4 ± 0.9	27.6 ± 1.6	187.5 ± 8.4	354.5 0.108 14.1 0.182	TOK 2023.418	
16536–1045 82642	YSC 156 –	31.3 ± 6.0	2024.60 ± 1.09	0.299 ± 0.037	0.1076 ± 0.0128	35.6 ± 7.3	25.4 ± 12.5	129.7 ± 39.8	146.7 0.065 169.7 0.070	TOK 2023.570	
16573–5344 –	SYU 11Aa,Ab –	9.04 ± 0.41	2023.909 ± 0.165	0.593 ± 0.095	0.0878 ± 0.0097	14.5 ± 35.6	57.4 ± 103.3	89.8 ± 99.6	165.0 0.035 261.1 0.075	TOK 2023.488	
17014–2639 83296	HDS2410 –	52.32 ± 1.05	2020.262 ± 0.202	0.000 ± 0.000	0.1571 ± 0.0012	105.0 ± 0.6	3.8 ± 0.5	0.0 ± 0.0	356.6 0.143 354.3 0.134	TOK 2022.288	
17258–1918 –	RST5542AB –	88.7 ...	2034.64 ...	0.75 ...	0.288 ...	76.0 ...	165.9 ...	260.3 ...	326.4 0.164 328.4 0.164	TOK 2022.444	
17415–5348 86569	HDS 2502 –	20.315 ± 0.217	2018.0452 ± 0.0268	0.5929 ± 0.0061	0.1341 ± 0.0009	136.4 ± 0.8	158.8 ± 1.3	322.0 ± 1.4	34.7 0.146 26.9 0.162	TOK 2023.488	
18190–4759 89752	B 936 –	88.84 ± 2.71	2002.899 ± 0.228	0.5610 ± 0.0148	0.3879 ± 0.0048	103.5 ± 0.4	161.4 ± 0.4	225.2 ± 1.6	159.6 0.475 159.1 0.483	TOK 2022.291	

NEW ORBITS (continuation)											
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.	
18480–1009 92250	HDS2665 –	42.033 ± 0.314	2023.906 ± 0.086	0.3130 ± 0.0046	0.4964 ± 0.0019	57.2 ± 0.4	42.8 ± 0.5	178.6 ± 1.8	223.0 0.341 232.4 0.334	TOK 2023.417	
18520–5418 TOK 92592	325Aa,Ab –	11.04 ± 0.19	2017.454 ± 0.107	0.2406 ± 0.0147	0.1033 ± 0.0020	50.3 ± 1.7	107.9 ± 2.1	328.3 ± 4.1	281.3 0.124 295.9 0.116	TOK 2023.325	
19242–6300 95385	TOK 799 –	7.12 ± 0.45	2024.075 ± 0.114	0.585 ± 0.075	0.0881 ± 0.0047	122.6 ± 4.3	127.3 ± 3.1	356.2 ± 7.9	139.3 0.035 358.6 0.050	TOK 2023.663	
19294–4057 –	B 1385 –	51.82 ± 0.92	1978.32 ± 1.03	0.0995 ± 0.0165	0.1821 ± 0.0015	50.5 ± 0.9	126.5 ± 1.5	108.7 ± 4.1	171.6 0.129 181.1 0.120	TOK 2023.325	
19369–6949 96487	GKM Aa,Ab –	2.013 ...	2015.363 ...	0.154 ...	0.024 ...	142.3 ...	208.1 ...	42.8 ...	41.3 0.025 252.9 0.021	TOK 2023.325	
19453–6823 TOK 97196	425Ba,Bb –	4.291 ± 0.072	2017.128 ± 0.079	0.850 ± 0.000	0.0503 ± 0.0046	133.1 ± 9.7	139.5 ± 12.9	203.8 ± 20.7	118.4 0.084 102.5 0.052	TOK 2023.325	
19461–0318 –	A 2597 12886	267 ...	1971.9 ...	0.708 ...	0.302 ...	71.7 ...	120.9 ...	267.8 ...	144.9 0.234 145.4 0.233	TOK 2022.682	
19561–3208 –	BWL 53Ba,Bb –	20.0 fixed	2025.37 ± 0.45	0.522 ± 0.057	0.1529 ± 0.0062	55.0 ± 2.6	33.6 ± 4.9	45.6 ± 4.0	15.8 0.090 46.0 0.072	TOK 2023.488	
19563–3137 98108	TOK 698 –	12.79 ± 0.47	2015.929 ± 0.191	0.164 ± 0.049	0.1085 ± 0.0040	90.8 ± 0.5	59.6 ± 0.4	44.0 ± 0.0	235.5 0.023 63.2 0.025	TOK 2023.325	
20216+1930 100397	COU 327AB –	51.71 ± 2.53	1987.21 ± 0.69	0.460 ± 0.048	0.1306 ± 0.0037	81.0 ± 1.5	67.5 ± 0.9	326.1 ± 11.6	247.6 0.165 248.3 0.160	TOK 2023.571	
20325–1637 101357	SEE 512 13961	42.62 ± 0.72	2001.79 ± 0.95	0.9146 ± 0.0315	0.1362 ± 0.0113	130.9 ± 6.5	139.0 ± 19.0	199.6 ± 27.8	125.3 0.251 124.6 0.249	TOK 2023.571	
21130–1133 –	VOU 24AB –	161.4 ± 6.7	2013.66 ± 0.57	0.3157 ± 0.0186	0.3088 ± 0.0082	143.2 ± 2.4	98.0 ± 2.5	250.0 ± 0.0	158.3 0.190 154.0 0.195	TOK 2023.418	
21198–2621 105312	BU 271AB –	183.35 ± 2.16	1846.64 ± 2.08	0.6604 ± 0.0080	2.1587 ± 0.0150	65.3 ± 0.3	243.0 ± 0.6	196.0 ± 1.8	38.1 0.696 43.8 0.722	TOK 2023.663	
21206+1310 105371	HDS3038 –	95.95 ...	2009.823 ...	0.306 ...	0.265 ...	90.8 ...	126.0 ...	251.6 ...	126.3 0.221 126.2 0.232	TOK 2022.289	

NEW ORBITS (continuation)												
WDS HIP	Name ADS	P(yr) σ_P	T(yr) σ_T	e σ_e	a(") σ_a	i(°) σ_i	Ω (°) σ_Ω	ω (°) σ_ω	2024 2025	Author(s) Last obs.		
21395–0003 106942	BU 1212AB 14847	48.87 ± 0.30	2020.82 ± 0.05	0.862 ± 0.005	0.423 ± 0.003	55.0 ± 0.5	140.8 ± 0.5	294.0 ± 1.0	200.31 209.90	0.1872 0.2132	D et al. 2023.571	
21395–0003 106942	BU 1212AB 14847	48.88 ± 0.11	2020.8144 ± 0.0074	0.8607 ± 0.0011	0.4211 ± 0.0018	54.7 ± 0.3	140.4 ± 0.3	294.4 ± 0.3	200.3 210.0	0.187 0.213	TOK 2023.571	
21477–3054 107608	FIN 330AB –	20.232 ± 0.134	2007.338 ± 0.081	0.4427 ± 0.0120	0.1232 ± 0.0013	108.8 ± 0.4	32.5 ± 0.7	216.5 ± 1.8	270.8 241.4	0.045 0.060	TOK 2023.418	
21522+0538 107948	JOD 23AB –	9.389 ± 0.046	2019.3473 ± 0.0230	0.4337 ± 0.0050	0.1465 ± 0.0012	22.2 ± 1.9	232.5 ± 4.8	286.2 ± 4.3	339.2 357.2	0.196 0.193	TOK 2023.571	
22441+0644 112240	TOK 703 –	4.887 ± 0.064	2015.886 ± 0.090	0.370 ± 0.039	0.0588 ± 0.0026	135.4 ± 5.4	170.5 ± 6.8	343.3 ± 12.8	340.9 283.4	0.074 0.038	TOK 2023.896	
23052–1822 –	B 1898 –	120.0 ...	1912.96 ...	0.406 ...	0.257 ...	116.8 ...	236.3 ...	94.2 ...	220.0 216.5	0.157 0.145	TOK 2023.896	
23179–5429 115035	RST1161 –	131.1 ...	2009.454 ...	0.286 ...	0.197 ...	140.6 ...	90.6 ...	103.7 ...	277.3 274.4	0.162 0.165	TOK 2020.927	
23210–0229 115294	LSC 107 –	35.0 ...	2015.328 ...	0.575 ...	0.133 ...	27.4 ...	176.1 ...	13.4 ...	337.1 341.6	0.166 0.176	TOK 2023.418	
23224–6516 115385	HDS3328 –	45.1 ...	2022.80 ...	0.68 ...	0.143 ...	69.3 ...	110.2 ...	134.9 ...	295.2 308.0	0.056 0.058	TOK 2023.896	
23285+0926 115871	YSC 138 –	20.28 ± 0.73	2008.118 ± 0.166	0.538 ± 0.036	0.0774 ± 0.0022	149.0 ± 7.3	154.1 ± 13.5	326.5 ± 18.5	325.3 314.1	0.090 0.077	TOK 2023.418	
23350+0136 116384	MEL 9BC –	35.23 ± 0.93	2009.66 ± 1.18	0.0819 ± 0.0119	0.4462 ± 0.0124	82.9 ± 0.2	9.3 ± 0.4	126.4 ± 13.2	326.9 346.8	0.086 0.148	TOK 2023.896	
23384–2922 116649	B 606 16885	182.7 ...	2035.65 ...	0.0 ...	0.318 ...	83.7 ...	175.7 ...	0.0 ...	173.1 173.3	0.293 0.297	TOK 2023.896	

ALZ = ALZNER

D et al. = DOCOBO, CAMPO, MÉNDEZ & COSTA

TOK = TOKOVININ

T+RV = Tokovinin, uses radial velocities

NEW DOUBLE STARS

Discovered by A. Debackère using LCO Global Telescope Network.

-V37: T1m Mc Donald Observatory, Fort Davis, Texas, USA, LCO

-W85: T1m Interamerican Observatory, Cerro Tololo, Chile, LCO

-W87: T1m Interamerican Observatory, Cerro Tololo, Chile, LCO

-E10: T2m Siding Spring Observatory, Faulkes Telescope South, Australia, LCO

STAR GAIA-DR3 Id.	Precise Coord (2000) RA DE	G mag	Plx e_{Plx}	pmRA e_{pmRA}	pmDE e_{pmDE}	Epoch	θ ($^{\circ}$)	ρ ($''$)	# Obs	N
DBR 337 A 3435196211499321728	062626.192 +290755.14	13.6	0.9859	1.015	-5.058	2023.055	216.85	5.548	1	V37
B 3435196211499323264	062625.937 +290750.67	13.99	0.9550	0.913	-5.064		0.04	0.004		
			0.0136	0.015	0.011					
			0.0180	0.020	0.015					
DBR 338 A 6300120061433649024	142834.873 -134019.58	10.67	6.0897	27.562	-36.894	2023.311	106.31	5.778	4	W85
B 6300120061433648896	142835.256 -134021.23	13.23	6.0795	27.991	-36.931		0.48	0.056		
			0.0214	0.020	0.018					
			0.0174	0.017	0.016					
DBR 338 A 6300120061433649024	142834.873 -134019.58	10.67	6.0897	27.562	-36.894	2023.311	4.10	72.847	4	W85
C 6300131846823910144	142835.226 -133906.93	11.26	6.0804	27.340	-36.853		0.03	0.051		
			0.0224	0.022	0.018					
DBR 339 C 5339062373862055936	112415.612 -594444.08	10.99	1.5141	-14.641	1.406	2023.009	86.68	5.112	1	W87 1
D 5339062373862059136	112416.293 -594443.74	13.08	1.5660	-13.367	1.396		0.09	0.009		
			0.0167	0.019	0.015					
			0.0321	0.035	0.029					
DBR 340 A 5336046585281542144	112620.207 -600650.30	13.13	1.1927	-12.070	4.937	2023.009	305.53	2.602	1	W87
B 5336046585260104576	112619.922 -600648.78	13.82	1.2340	-11.239	4.852		0.19	0.003		
			0.0122	0.013	0.012					
			0.0227	0.024	0.023					
DBR 341 A 4094890612550440832	181635.103 -182628.51	13.04	0.4512	0.685	-1.190	2023.678	310.86	2.778	1	E10
B 4094890612535415424	181634.955 -182626.68	14.25	0.4169	0.767	-1.034		0.06	0.004		
			0.0157	0.019	0.016					
			0.0465	0.057	0.048					
DBR 342 A 1989096459702126592	230200.611 +510948.67	12.92	0.5302	-2.390	-0.965	2023.896	277.64	4.417	1	V37
B 1989096455403354112	230200.143 +510949.23	13.93	0.5334	-2.274	-0.548		0.31	0.023		
			0.0177	0.016	0.015					
			0.0155	0.014	0.013					

Notes (1) The component C of DBR 349 CD is the secondary component of HRG 61 BC

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The deadline for contributions to Information Circular No. 213 is:

June 15th 2024

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