INTERNATIONAL ASTRONOMICAL UNION

COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)

DOUBLE STARS INFORMATION CIRCULAR No. 195 (JUNE 2018)

NEW ORBITS

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019	Author(s)
- 00507+6415	MCA 2 62°8788	5^y7253 0″0286	1982.3495 142°60	0.5343 323°61	302°70 2017.6997	198°1 0″027 165.5 0.038	MASON (1)
1005 01151+3416	HU 803 0.8068	446.2 0.740	1793.08 58.3	0.258 346.7	41.9 2016.704	215.3 0.915 215.6 0.916	LING et al. (*)
- 02434-3756	TOK 187 20.3729	17.671 0.237	2016.919 145.2	0.829 27.2	27.8 2017.682	227.9 0.150 213.5 0.236	TOKOVININ
2965 04044+2406	MCA 13 45.3186	7.9438 0.0272	1985.0894 141.09	0.6839 287.35	260.09 2016.1145	205.6 0.023 178.6 0.030	MASON (2)
- 04248+1552	HDS 566 6.5455	55.0 0.342	2035.135 114.5	0.677 231.8	19.2 2017.934	329.1 0.262 325.5 0.247	TOKOVININ
- 05226+0236	A 2641 3.9166	91.917 1.143	1945.338 114.3	0.107 136.6	166.0 2018.087	140.8 0.817 137.4 0.766	TOKOVININ
- 05417-0254	BU 1052 3.4061	105.692 0.421	1960.774 111.8	0.819 142.6	169.2 2018.073	183.6 0.646 183.3 0.649	TOKOVININ
- 05598-4814	HDS 814 2.0571	175.0 0.991	2115.230 95.0	0.759 86.8	10.1 2017.682	156.3 0.268 154.6 0.258	TOKOVININ
- 06003-3102	TOK 9 CE 15.2739	23.57 0.434	2015.378 98.5	0.221 177.6	146.8 2018.251	313.7 0.204 294.8 0.107	TOKOVININ

(1) Combined solution orbit using radial velocities from 1997AJ....114.1607M, K1 = 11.03 km/s, Gamma = -2.38 km/s.
(2) Combined solution orbit using radial velocities from 1997AJ....114.1607M, K1 = 8.66 km/s, Gamma = 10.36 km/s.

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019		Author(s)
- 06173+0506	CAT 1 Aa,Ab 10.1351	35.52 0.648	1998.057 41.3	0.809 76.0	166.8 2018.251	63.6 66.1	0.882 0.868	TOKOVININ[a]
- 06410+0954	CHR 168 Aa,Ab 1.8899	190.5 0.170	1995.845 38.8	0.851 287.0	197.4 2018.251	269.2 270.4	0.137 0.140	TOKOVININ
5455 06478+0020	STT157 0.72	500. 0.781	1958.3 129.4	0.4 238.4	137.8 2018.2352	161.6 160.9	0.576 0.583	DOCOBO et al. (**)
- 06584-3407	HDS 970 6.8660	52.432 0.173	2020.521 146.4	0.800 233.5	225.5 2018.087	101.9 81.6	0.081 0.062	TOKOVININ
- 07003-2207	FIN 334 Aa,Ab 1.6550	217.52 0.142	2031.710 111.1	0.072 180.0	140.5 2018.251	330.5 329.7	0.121 0.123	TOKOVININ
5687 07003-2207	FIN334AaAb 3.4996	102.87 0.112	1980.21 124.3	0.859 292.4	86.1 2018.2491	330.5 329.6	0.120 0.121	DOCOBO et al. (I) (**)
5687 07003-2207	FIN334AaAb 0.36	1000. 0.444	2012. 106.3	0.739 171.2	153.2 2018.2491	330.5 329.5	0.117 0.117	DOCOBO et al. (II) (**)
5703 07013-0906	A671 2.2572	159.49 0.314	1965.15 132.4	0.741 115.2	112.3 2018.2491	6.2 185.4	0.346 0.349	DOCOBO et al. (I) (**)
5703 07013-0906	A671 1.0526	342. 0.453	1889. 115.8	0.081 348.9	159.6 2018.2491	6.4 5.7	0.351 0.356	DOCOBO et al. (II) (**)
- 07289-3015	HDS 1054 AB 46.1599	7.800 0.253	2013.112 31.2	0.896 178.6	173.4 2018.087	177.1 183.2	0.459 0.392	TOKOVININ
- 07304+1352	TOK 392 DaDb 47.2367	7.621 0.102	2019.554 40.4	0.692 271.8	183.6 2018.073	315.9 351.2	0.108 0.067	TOKOVININ[a]
- 07364+0705	HEN 3 15.1759	23.722 0.635	2016.210 14.1	0.584 63.6	80.0 2018.073	234.4 255.9	0.417 0.537	TOKOVININ
- 07456-3410	TOK 193 Aa,Ab 15.5837	23.10 0.598	2011.457 67.2	0.446 183.8	241.3 2018.251	227.1 231.2	0.644 0.728	TOKOVININ

([a]) Combined orbit using radial velocities.

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019		Author(s)
- 08021-1710	HDS 1140 AB 11.0691	32.52 0.364	2005.487 119.2	0.236 203.8	104.6 2018.073	106.2 102.6	0.435 0.441	TOKOVININ
- 08226-2859	HDS 1192 14.0036	25.708 0.141	2010.861 132.8	0.336 229.9	47.0 2018.073	44.7 38.3	0.162 0.168	TOKOVININ
- 08279-2608	HDS 1207 6.2530	57.572 0.227	2002.556 27.0	0.416 124.3	30.9 2018.073	291.7 296.1	0.242 0.248	TOKOVININ
- 08280-3507	FIN 314 Aa,Ab 5.4228	66.39 0.132	2020.125 77.2	0.041 199.2	231.7 2018.238	53.2 54.6	0.126 0.123	TOKOVININ
- 08380-0844	HDS 1242 10.1571	35.443 0.223	2015.291 16.3	0.386 221.5	247.8 2018.073	170.3 187.6	0.153 0.170	TOKOVININ
- 08526-3633	FIN 296 5.9906	60.09 0.090	1984.070 116.9	0.0 0.0	98.2 2018.238	267.2 264.0	0.085 0.081	TOKOVININ
- 09118-4218	HDS 1332 3.1733	113.447 0.313	2012.227 126.1	0.50 107.1	22.7 2018.087	212.5 207.8	0.179 0.191	TOKOVININ
- 09123+1500	FIN 347Aa,Ab 133.1100	2.70453 0.1124	1979.9901 123.77	0.4335 352.86	318.67 2018.2518	291.0 149.7	0.059 0.152	MASON (3)
- 09457-3902	HDS 1409 10.5942	33.98 0.497	1997.383 112.4	0.479 121.0	29.1 2018.164	48.8 46.0	0.550 0.568	TOKOVININ
- 10174-5354	CVN16AaAb 67.3275	5.347 0.096	2016.711 13.1	0.123 99.4	134.1 2018.2355	333.9 32.7	0.096 0.103	DOCOBO et al. (**)
- 11221-2447	I 507 AB 1.7502	205.69 1.052	2024.147 87.9	0.429 69.6	4.3 2018.087	6.1 6.4	0.475 0.436	TOKOVININ
- 11514+1148	HDS 1672 6.7619	53.24 0.332	2008.921 42.0	0.784 100.0	236.4 2018.183	120.4 123.8	0.309 0.324	TOKOVININ

(3) Combined solution orbit using radial velocities from 1982Obs...102..217G, K1 = 11.65 km/s, K2 = 12.68 km/s, Gamma = 50.19 km/s, M1 = 0.978±0.176$M_\odot$, M2 = 0.898±0.162$M_\odot$, par = 46.95±8.51 mas.

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019		Author(s)
- 12155-3106	RST1658 5.8065	62.00 0.680	2047.37 51.4	0.226 240.7	116.9 2018.2356	172.5 177.5	0.579 0.561	DOCOBO et al. (**)
- 12357-1650	FIN 368 Aa,Ab 17.6575	20.39 0.147	2015.707 100.2	0.036 87.7	110.9 2018.237	302.4 296.9	0.096 0.125	TOKOVININ
- 12444+2200	HDS 1783 3.0590	117.68 0.492	2014.466 70.3	0.836 255.4	102.8 2018.238	103.7 106.7	0.197 0.230	TOKOVININ
- 12508+0806	HDS 1803 8.7542	41.123 0.197	1986.145 111.9	0.547 108.8	34.3 2018.164	46.5 44.0	0.207 0.203	TOKOVININ
- 12528+1225	TOK 401 34.9337	10.305 0.116	2016.253 76.4	0.101 322.2	117.7 2018.164	126.7 149.7	0.093 0.049	TOKOVININ
- 12572+0818	FIN 380 6.5220	55.20 0.232	2023.629 86.2	0.87 121.2	164.9 2018.237	162.9 163.2	0.195 0.178	TOKOVININ
- 12572+0818	FIN380 6.5455	55.00 0.235	2023.61 86.4	0.877 120.8	164.9 2018.2357	162.9 163.2	0.196 0.179	DOCOBO et al. (**)
- 13000-4123	I 1224 1.9592	183.749 0.243	2052.110 73.0	0.380 37.9	156.7 2018.164	112.7 115.9	0.097 0.101	TOKOVININ
- 13005-3330	HDS 1824 Aa,Ab 8.1310	44.275 0.408	2016.641 114.5	0.848 103.5	174.1 2018.238	337.8 325.8	0.143 0.171	TOKOVININ
8762 13044-1316	HU642AB 0.5455	660. 0.705	1955. 106.9	0.408 124.8	47.5 2018.2361	221.5 221.2	0.503 0.503	DOCOBO et al. (**)
- 13132-0501	TOK 402 22.6840	15.87 0.142	2016.741 111.4	0.555 259.2	115.9 2018.164	120.7 109.7	0.094 0.127	TOKOVININ
- 13140-4849	RST 628 1.6954	212.35 0.198	2013.447 180.0	0.644 0.0	71.4 2018.401	28.2 20.4	0.079 0.082	TOKOVININ
- 13175-4033	I 425 1.4400	250.0 0.754	2050.086 77.2	0.75 39.7	129.9 2018.164	6.1 9.4	0.196 0.186	TOKOVININ
- 13226-6059	FIN 208 AB 9.6336	37.369 0.196	2033.161 85.6	0.359 266.6	135.2 2018.088	298.1 302.8	0.066 0.086	TOKOVININ

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019		Author(s)
- 13237+1257	HDS 1880 3.6000	100.0 0.196	2016.232 159.1	0.746 268.4	148.8 2018.164	181.9 162.6	0.060 0.074	TOKOVININ
- 13286-2306	HDS 1887 7.6608	46.993 0.300	2013.099 126.5	0.0 0.0	10.3 2018.251	345.7 339.3	0.262 0.246	TOKOVININ
- 13437-4204	FIN 353 AB 2.7692	130.0 0.116	2020.439 87.0	0.723 112.2	50.7 2017.285	55.7 64.9	0.020 0.007	TOKOVININ
- 14047-7204	HDS 1975 12.7595	28.214 0.137	2017.408 0.0	0.093 356.4	0.0 2018.252	5.5 20.8	0.125 0.125	TOKOVININ
- 14243-3838	RST1785 3.8986	92.34 0.222	1987.77 45.3	0.220 65.2	60.7 2018.2523	256.9 259.1	0.243 0.242	DOCOBO et al. (**)
- 14295-3702	HDS 2045 Aa,Ab 25.4468	14.147 0.117	2008.595 128.3	0.428 125.7	168.2 2018.164	185.4 175.7	0.145 0.138	TOKOVININ
- 14357-4537	HDS 2060 4.6788	76.943 0.334	2010.466 101.2	0.614 191.6	36.0 2018.164	55.0 51.3	0.133 0.165	TOKOVININ
- 14382+1402	TOK 406 46.2381	7.786 0.097	2016.050 131.4	0.343 167.8	6.3 2018.164	61.8 31.7	0.079 0.112	TOKOVININ
- 14589+0636	WSI 81 65.9564	5.458 0.095	2016.670 154.9	0.401 334.7	50.3 2018.164	303.8 265.3	0.098 0.127	TOKOVININ
- 15006+0836	YSC 8 51.8732	6.940 0.117	2016.879 96.3	0.374 99.3	149.2 2018.164	326.8 317.5	0.102 0.068	TOKOVININ
- 15160-7025	HDS2146 11.5295	31.224 0.129	2014.313 34.6	0.750 242.8	165.0 2018.164	180.2 186.6	0.119 0.136	TOKOVININ
- 15367-4208	TOK 408 Ca,Cb 46.2121	7.790 0.059	2016.751 59.6	0.038 95.1	108.5 2018.238	276.1 300.7	0.055 0.056	TOKOVININ
- 15394-1355	HDS 2210 9.1866	39.188 0.174	2017.750 108.2	0.065 220.0	351.7 2018.183	155.7 149.1	0.125 0.106	TOKOVININ
- 15496-0326	CHR 259 5.0637	71.094 0.552	1989.836 104.3	0.662 120.1	284.4 2018.183	319.0 317.0	0.365 0.385	TOKOVININ

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019	Author(s)
- 15513-0305	CHR 51 5.5520	64.842 0.562	2033.411 94.4	0.800 100.0	54.3 2018.183	61.8 0.412 61.3 0.418	TOKOVININ
- 16038+1406	HDS 2265 3.6586	98.40 0.551	2022.364 75.5	0.588 111.5	0.3 2018.183	15.4 0.203 22.8 0.149	TOKOVININ
- 16054-1948	MCA 42 CE 18.9491	19.00 0.111	2006.285 49.5	0.638 262.1	289.2 2018.238	26.1 0.114 35.4 0.110	TOKOVININ
- 16094-3103	I557 2.6432	136.20 0.620	2034.00 85.9	0.726 68.4	26.3 2018.2359	18.1 0.256 18.8 0.265	DOCOBO et al. (**)
- 16578+1317	HDS 2399 7.9332	45.379 0.384	2018.800 29.6	0.830 100.7	14.1 2018.402	29.4 0.108 148.2 0.064	TOKOVININ
- 17014-2639	HDS 2410 11.4653	31.399 0.125	1999.007 105.9	0.353 137.0	0.9 2018.184	7.6 0.151 5.7 0.154	TOKOVININ
10385 17115-1630	HU169 4.5524	79.08 0.223	1992.00 124.4	0.452 61.8	22.0 2018.2499	181.1 0.262 179.4 0.261	DOCOBO et al. (**)
- 17119-0151	LPM629 10.3923	34.64 0.753	2023.09 14.7	0.160 193.3	170.8 2018.2363	295.7 0.679 308.2 0.664	DOCOBO et al. (**)
- 17290-2420	RST 3105 1.4524	247.872 0.842	2024.331 132.8	0.616 296.6	162.7 2018.252	279.2 0.262 270.6 0.246	TOKOVININ
- 17362-1752	YSC 158 Aa,Ab 24.1230	14.924 0.071	2012.490 74.3	0.194 127.1	93.7 2018.252	17.5 0.023 58.8 0.037	TOKOVININ
10899 17563+0259	A2189 2.0963	171.73 0.235	1975.08 71.0	0.517 328.3	150.8 2018.2555	288.7 0.132 290.4 0.137	DOCOBO et al. (**)
- 18092-2211	RST 3157 38.6282	9.320 0.149	2015.185 48.1	0.413 238.6	63.1 2018.252	79.2 0.178 95.4 0.176	TOKOVININ
- 18171-4336	HDS 2583 1.0838	332.169 0.196	2014.309 148.4	0.718 291.1	8.9 2018.252	40.3 0.057 33.0 0.060	TOKOVININ
- 18181-0120	HDS 2587 4.9406	72.865 0.130	2011.774 55.5	0.300 100.2	8.8 2018.238	174.6 0.095 179.3 0.101	TOKOVININ

NEW ORBITS (continuation)

ADS α**2000**δ	**Name** **n**	**P** **a**	**T** **i**	**e** ω	Ω**(2000)** **Last ob.**	**2018** **2019**	**Author(s)**
-	YSC 133	7.290	2017.975	0.614	109.5	47.9 0.009	TOKOVININ
18439-0649	49.3805	0.082	104.4	75.8	2018.402	284.3 0.074	
-	RST2073	243.5	1983.0	0.544	130.6	149.8 0.348	DOCOBO
18464-2755	1.4784	0.406	128.0	214.0	2018.25	148.7 0.357	et al. (**)
-	YSC 12 AB	105.0	2121.131	0.0	45.4	40.2 0.485	TOKOVININ
18500+1519	3.4286	0.486	143.4	0.0	2018.257	37.5 0.483	
-	FIN357	14.050	2018.226	0.385	101.9	282.0 0.088	DOCOBO
19035-6845	25.6228	0.142	163.5	193.9	2018.2554	223.5 0.092	et al. (**)
-	B 1385	58.30	1985.629	0.0	301.0	134.9 0.179	TOKOVININ
19294-4057	6.1748	0.185	46.9	0.0	2018.402	139.5 0.175	
-	HDS 3013 Aa,Ab	25.008	2019.572	0.508	161.0	131.0 0.172	TOKOVININ
21088-0426	14.3956	0.305	136.2	106.6	2018.402	87.2 0.115	
-	CHR 188 Aa,Ab	3.975	2015.721	0.594	274.9	301.1 0.077	TOKOVININ
22273-6458	90.5576	0.053	43.5	205.7	2018.403	343.3 0.043	
-	HDS 3215	35.666	1997.052	0.211	293.5	92.3 0.876	TOKOVININ
22384-6523	10.0936	0.736	180.0	0.0	2018.403	85.2 0.864	
-	HDS 3246	21.433	2016.136	0.448	272.0	90.2 0.125	TOKOVININ
22508-6543	16.7969	0.214	92.4	140.2	2018.403	87.8 0.092	

(*) LING, J. F.; SCARDIA, M.; PRIEUR, J.-L.; PANSECCHI, L.; ARGYLE, R. W.; ARISTIDI, E.; ZANUTTA, A.; ABE, L.; BENDJOYA, P.; RIVET, J.-P.; SUAREZ, O. & VERNET, D.
(**) DOCOBO, J. A.; GÓMEZ, J.; CAMPO, P. P.; ANDRADE, M.; HORCH, E. P.; COSTA, E. & MÉNDEZ, R. A.

NEW LINEAR FITS

Authors: SCARDIA, PRIEUR, PANSECCHI, ARGYLE, LING, ARISTIDI, ZANUTTA, ABE, BENDJOYA, RIVET, SUAREZ & VERNET

ADS	**Name**	X_0	X_A	ρ_0	T_0	**2018**
α**2000**δ	**-**	Y_0	Y_A	θ_0	**Last ob.**	**2019**
4841	BU 1008	-0.7054200	-0.0064235	0.988	1846.926	256°6 1″855
06149+2230	-	-0.6916823	0.0065519	314.44	2016.112	256.5 1.862

NEW DOUBLE STARS

Discovered by: Marco Scardia using the speckle camera PISCO attached to the Epsilon telescope of the Calern Observatory

STAR	**Coord. FK5 J2000**	**Mag.**	**Epoch**	θ (°)	ρ (″)
SCA 182 AC	20 15 40.3 +43 38 59.6	9.06-10.82	2017.830	314.2	3.076
SCA 182 BC	20 15 40.3 +43 38 59.6	9.82-10.82	2017.830	312.2	2.851
SCA 183 BC	04 14 09.9 +51 49 41.0	10.23-12.23	2018.112	193.0	4.755
SCA 184	04 14 14.4 +51 50 03.1	11.7-13.0	2018.112	121.9	5.600
SCA 185 AC	10 20 32.3 +06 25 47.6	7.99-9.43	2018.145	8.8	7.633
SCA 185 BC	10 20 32.3 +06 25 47.6	8.30-9.43	2018.145	14.6	7.168
SCA 186 AC	14 15 50.6 +10 17 59.3	9.69-9.77	2018.315	149.2	3.928
SCA 186 BC	14 15 50.6 +10 17 59.3	10.32-9.77	2018.315	144.5	3.849

NEW DOUBLE STARS

Discovered by: Luigi Pansecchi using the speckle camera PISCO attached to the Epsilon telescope of the Calern Observatory

STAR	**Coord. FK5 J2000**	**Mag.**	**Epoch**	θ (°)	ρ (″)
PNC 1 AC	15 18 44.1 -05 31 13.0	10.19-14.5	2018.391	81.5	2.58
PNC 1 BC	15 18 44.1 -05 31 13.0	10.21-14.5	2018.391	69.9	2.59

NEW COMPANION TO EXOPLANET HOST STARS

Reported by: Francisco Rica using GAIA-DR2

Astrometric data from GAIA-DR2

STAR	**parallax** (mas)	μ**(AR)** (mas/yr)	μ**(DEC)** (mas/yr)	**Vrad** (km/s)
HD 108341	20.42±0.03	-120.76±0.05	+114.19±0.04	+56.72± 0.24
companion	20.38± 0.04	-122.26±0.07	+118.32± 0.06	-
Kepler-140	1.684 ± 0.020	-10.48 ± 0.03	-16.48 ± 0.04	-33.41± 5.73
companion	1.771 ± 0.035	-10.59 ± 0.06	-16.59 ± 0.06	-

Other values for 2015.5

	HD 108341 companion	Kepler-140 companion
magnitude	13.08	15.66
θ	7°36	286°85
ρ	7″814	5″453

NOTES

Others papers on double stars published in 2015 and 2017

- AGATI , J.-L. et al.: *Are the orbital poles of binary stars in the solar neighbourhood anisotropically distributed?*. Astron. Astroph. **574**, 6A (2015).
- PRIEUR, J.-L. et al.: *Speckle observations with PISCO in Merate (Italy): XV.* Astron. Nach. **338**, (1), 74 (2017).

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The deadline for contributions to Information Circular No. 196 is:

October 15th 2018

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