



Orbital elements of double stars: COU 812, ADS 11906, ADS 14766

Josefina Ling, Marco Scardia, Jean-Louis Prieur, Luigi Pansecchi, Robert W. Argyle, Eric Aristidi, Alessio Zanutta, Luca Maccarini, Lyu Abe, Philippe Bendjoya, et al.

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INTERNATIONAL ASTRONOMICAL UNION

COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)

DOUBLE STARS INFORMATION CIRCULAR No. 201 (JUNE 2020)

NEW ORBITS

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2020 2021	Author(s)
- 00090-5400	HDO 181 1°7831	2018 ^y 9 0''400	1981.29 158°6	0.380 13°2	141°5 2018.73	13°3 0''384 11.6 0.390	ALZNER et al. (1)
- 00465-0131	RST 4157 3.7971	94.8 0.161	2008.20 59.0	0.647 200.6	97.8 2019.540	77.3 0.125 79.6 0.135	TOKOVININ
- 03087-4413	HDS 398 2.1176	170.0 0.235	2003.37 109.7	0.462 39.8	243.1 2018.807	89.5 0.111 86.9 0.120	TOKOVININ
- 03178-1407	HU 432 4.8866	73.67 0.202	1979.23 40.4	0.152 223.2	45.4 2019.857	95.6 0.193 99.7 0.190	TOKOVININ
3210 04259+1852	BU 1185 13.0814	27.52 0.250	2030.53 97.2	0.038 327.2	23.3 2020.059	202.5 0.256 200.8 0.242	SCARDIA et al. (2)
- 04507-8202	HDS 625 3.0981	116.2 0.245	2017.9 97.5	0.800 102.5	306.1 2020.111	126.6 0.072 124.3 0.087	TOKOVININ
3614 05017+2050	HU 445 AB 4.3247	83.24 0.573	2016.75 69.0	0.837 276.2	154.1 2018.972	167.2 0.237 171.6 0.261	TOKOVININ
- 05047+7404	STT 89 2.5586	140.7 0.373	1919.08 83.6	0.878 50.9	111.9 2003.96	304.0 0.288 304.2 0.281	ALZNER
- 05091-4201	HDS 676 4.5125	79.78 0.239	2017.47 66.5	0.500 222.8	159.1 2020.018	46.2 0.055 77.1 0.055	TOKOVININ
- 05102-7236	WSI 122 5.5385	65.0 0.769	2009.03 131.7	0.641 153.3	165.7 2019.947	228.9 0.587 224.4 0.631	TOKOVININ
- 05249-5810	I 390 0.6000	600. 0.468	2069.0 70.4	0.600 205.0	266.2 2019.950	40.5 0.144 42.2 0.146	TOKOVININ

NEW ORBITS (continuation)							
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2019 2020	Author(s)
4373 05472+2153	HU 39 7.6320	47.17 0.267	1975.23 99.2	0.260 195.1	41.0 2020.10	223.7 0.196 221.6 0.199	ALZNER
- 05498-7225	TOK 431 20.0000	18.0 0.147	2022.45 128.3	0.170 124.8	145.2 2020.111	99.2 0.099 64.2 0.079	TOKOVININ
- 05505-5246	B 1493 3.1858	113.0 0.163	2005.0 140.5	0.670 170.2	247.9 2019.950	301.8 0.129 299.1 0.136	TOKOVININ
4604 06032+5813	A 1315 0.6000	600. 1.135	2000.8 78.0	0.860 64.6	91.8 2016.953	272.1 0.485 272.4 0.502	DOCOBO & LING
- 06234-3001	DAW 120 0.9600	375.0 0.407	2034.82 83.8	0.270 145.4	84.8 2019.952	254.1 0.154 254.8 0.161	TOKOVININ
5408 06455+2922	A 122 3.5191	102.3 0.334	1976.99 113.7	0.647 228.5	40.9 2020.042	22.0 0.435 21.4 0.432	SCARDIA et al. (2)
5857 07113-1032	A 2122 1.3662	263.5 0.192	2021.72 136.8	0.582 187.7	144.2 2019.210	326.4 0.081 321.8 0.081	TOKOVININ
07303-5657	FIN 105 2.1176	170.0 0.244	2046.15 153.5	0.578 107.1	52.1 2018.2355	67.4 0.238 65.7 0.233	DOCOBO et al. (3)
07427-3510	HDS 1091 1.3091	275.0 0.332	2017.40 115.2	0.690 200.2	93.3 2018.8438	250.1 0.082 242.9 0.075	DOCOBO et al. (3)
- 08259-1623	HDS 1199 1.0000	360.0 1.441	2013.15 180.0	0.590 0.0	178.6 2018.073	147.1 0.627 142.9 0.637	TOKOVININ
- 08394-3636	I 314 5.4720	65.79 0.565	1990.84 99.0	0.824 339.7	57.5 2018.236	241.5 0.937 241.3 0.947	TOKOVININ
- 09074-4357	B 1646 AB 1.7308	208.0 0.188	2029.45 116.2	0.600 161.1	15.9 2019.953	278.3 0.044 266.9 0.044	TOKOVININ
7225 09110-1929	I 824 0.3830	940. 0.492	2029.4 130.3	0.869 18.0	116.5 2018.2358	162.1 0.076 156.8 0.074	DOCOBO et al. (3)
- 09149+0427	HEI 350 6.5018	55.37 0.937	1969.13 125.5	0.600 72.8	344.0 2019.371	358.3 0.609 350.5 0.557	TOKOVININ

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2019 2020	Author(s)
- 09370-2610	WSI 127 11.2585	32.0 0.391	2010.47 0.0	0.000 0.0	284.0 2019.950	31.3 0.391 42.6 0.391	TOKOVININ
7541 09512+3629	HO 369 3.0483	118.1 0.247	1923.62 74.9	0.847 327.3	289.8 2020.28	107.0 0.318 107.3 0.311	ALZNER I
7541 09512+3629	HO 369 0.3273	1100. 1.100	1961.6 85.0	0.668 329.5	99.2 2020.28	107.2 0.319 107.5 0.315	ALZNER II
- 10038-0823	HDS 1454 11.0898	32.46 0.086	2010.87 128.3	0.700 335.3	175.0 2020.112	27.9 0.103 24.7 0.111	TOKOVININ
- 10043-2823	I 292 0.9474	380.0 0.869	1971.25 142.9	0.718 71.7	139.8 2020.200	298.9 0.810 298.3 0.818	TOKOVININ
7674 10116+1321	HU 874 AB 20.0423	17.962 0.117	2022.828 78.5	0.930 355.2	106.2 2019.3816	288.4 0.147 289.6 0.112	DOCOBO et al. (3)
- 10161-2837	TOK 199 142.4197	2.528 0.044	2014.907 115.5	0.309 58.6	95.7 2019.377	47.0 0.016 255.5 0.046	TOKOVININ
7738 10217-0946	BU 25 0.2687	1340. 2.546	1960.5 133.9	0.297 20.3	168.2 2018.1811	128.1 1.535 127.6 1.532	DOCOBO et al. (3)
7929 10480+4107	STT 229 1.0733	335.4 0.639	2077.4 154.0	0.472 285.7	64.1 2018.77	254.2 0.630 253.4 0.624	ALZNER
- 11192-1950	TOK 383Aa,Ab 37.4904	9.602 0.042	2020.236 130.4	0.521 219.0	30.8 2020.019	206.1 0.021 77.6 0.022	TOKOVININ
- 12111-5302	HU 1604 1.7561	205. 0.341	2049.0 55.6	0.431 32.7	89.2 2018.1621	34.2 0.194 37.0 0.195	DOCOBO et al. (3)
- 12157-8047	FIN 195 1.2857	280.0 0.322	2032.74 60.0	0.754 44.6	96.1 2019.374	58.9 0.112 62.4 0.111	TOKOVININ
- 12283-6146	RST 4499 BC 12.8448	28.027 0.227	1990.024 152.9	0.174 80.5	169.1 2020.112	50.3 0.175 32.7 0.187	TOKOVININ
- 12358-6150	RST 4503 1.2000	300.0 0.210	1729.08 53.0	0.317 25.0	120.9 2020.112	122.8 0.146 124.2 0.145	TOKOVININ

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2019 2020	Author(s)
- 12455-4552	HDS 1789 Aa,Ab 9.9079	36.34 0.161	2019.77 38.0	0.250 239.1	63.8 2020.117	300.9 0.101 321.0 0.097	TOKOVININ
- 12463-6050	B 1722 1.2000	300.0 0.333	2016.63 47.1	0.906 97.8	32.7 2020.112	225.7 0.070 232.5 0.081	TOKOVININ
13117-2633	FIN 305 17.9336	20.074 0.226	2021.801 114.4	0.989 91.7	8.4 2019.0494	74.5 0.099 66.0 0.064	DOCOBO I et al. (3)
13117-2633	FIN 305 8.8452	40.700 0.219	2006.500 98.6	0.045 304.5	93.3 2019.0494	72.7 0.089 61.1 0.062	DOCOBO II et al. (3)
- 13132-0501	TOK 402 17.6865	20.35 0.163	2016.72 112.1	0.627 254.4	114.0 2020.019	103.5 0.155 98.2 0.164	TOKOVININ
- 13137-6248	HDS 1852 13.9549	25.80 0.151	2001.34 57.7	0.240 182.5	140.7 2020.112	181.1 0.116 196.2 0.096	TOKOVININ
- 13191-5239	I 516 1.2000	300.0 0.770	2083.04 89.0	0.653 238.9	186.5 2020.117	353.0 0.070 354.7 0.079	TOKOVININ
- 13194-3957	RST 1712 1.6405	219.4 0.590	2021.85 160.1	0.396 237.8	138.8 2017.534	270.3 0.345 266.1 0.343	TOKOVININ
8863 13203+1746	A 2166 32.0618	11.228 0.098	2007.128 67.8	0.823 314.9	197.9 2020.117	323.6 0.050 340.2 0.079	TOKOVININ
- 13217-3919	HDS 1875 9.4459	38.11 0.205	2019.61 117.5	0.550 228.0	189.2 2020.019	326.7 0.057 262.6 0.050	TOKOVININ
13305+0729	A 1789 2.5098	143.44 0.191	1962.71 137.8	0.420 105.4	67.9 2018.2361	159.6 0.195 158.0 0.196	DOCOBO et al. (3)
9301 14323+2641	A 570 12.0421	29.90 0.204	2013.76 152.9	0.167 49.6	15.6 2020.338	228.6 0.193 217.5 0.204	SCARDIA et al. (2)
- 14332-6935	HDS 2055 4.5000	80.0 0.220	2051.67 103.2	0.400 261.8	132.1 2020.201	5.1 0.084 359.1 0.090	TOKOVININ
14516-4335	FIN 319 10.8346	33.23 0.239	2028.75 80.6	0.315 28.1	104.5 2019.3817	328.3 0.062 8.4 0.042	DOCOBO et al. (3)

NEW ORBITS (continuation)								
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2019 2020	Author(s)	
14592-4206	HDS 2116 Aa,Ab 6.1523	58.52 0.287	2011.10 90.9	0.304 215.1	156.4 2019.3798	157.7 0.145 157.4 0.176	DOCOBO et al. (3)	
9528 15106+2021	HU 144 0.8727	412.5 1.128	2130.71 87.3	0.807 253.7	232.9 2019.377	333.1 0.083 337.5 0.084	TOKOVININ	
9552 15157-2736	BU 350 0.2156	1670. 1.902	2018.9 138.7	0.918 40.8	41.0 2018.1814	354.4 0.133 340.9 0.130	DOCOBO et al. (3)	
- 15282-0626	HDS 2175 2.6332	136.7 0.464	1993.77 66.2	0.340 159.4	173.4 2020.117	77.9 0.186 84.0 0.188	TOKOVININ	
9692 15328+1945	HU 577 3.3272	108.2 0.294	1944.45 61.9	0.392 127.1	35.6 2020.420	27.8 0.352 28.9 0.350	SCARDIA et al. (2)	
- 15428-6147	HDS 2218 6.0000	60.0 0.114	2024.67 143.2	0.426 287.9	72.3 2020.112	217.4 0.073 205.7 0.066	TOKOVININ	
9797 15493+0503	A 1126 1.2457	289.0 0.197	1999.1 63.5	0.647 357.9	34.4 2019.5387	140.3 0.059 144.8 0.062	DOCOBO et al. (3)	
- 15544-6131	HDS 2240 4.5000	80.0 0.191	2020.49 0.0	0.830 0.0	182.8 2020.201	143.1 0.036 223.5 0.036	TOKOVININ	
- 16020-3042	B 1313 2.4000	150.0 0.234	2033.83 78.2	0.464 193.2	151.2 2020.112	304.1 0.072 308.3 0.079	TOKOVININ	
- 16263-0943	RST 3945 2.7211	132.3 0.355	1921.19 53.1	0.161 58.4	51.2 2018.181	14.9 0.287 17.3 0.291	TOKOVININ	
- 16274-3729	B 872 2.0072	179.4 0.398	1977.70 108.6	0.508 146.3	132.9 2018.181	184.7 0.186 182.3 0.194	TOKOVININ	
- 16302-1440	WSI 132 14.1812	25.39 0.321	2021.13 127.9	0.521 315.4	11.2 2020.201	114.3 0.111 48.6 0.121	TOKOVININ	
10143 16402-2800	VOU 44 AB 3.4392	104.7 0.192	2067.0 41.0	0.204 154.0	13.4 2019.3773	3.0 0.227 4.8 0.227	DOCOBO et al. (3)	
- 16536-1045	YSC 156 15.4123	23.36 0.089	2023.93 10.0	0.500 100.0	81.6 2020.201	63.1 0.088 78.7 0.075	TOKOVININ	

NEW ORBITS (continuation)								
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2019 2020	Author(s)	
- 16596-4117	B 1839 AB 4.1155	87.5 0.172	1961.4 180.0	0.360 0.0	348.7 2018.255	136.1 0.215 133.6 0.212	TOKOVININ	
10305 17012-1213	HU 163 2.2500	160.0 0.199	2009.02 93.8	0.730 28.6	154.7 2019.536	337.7 0.102 337.4 0.112	TOKOVININ	
- 17315-6026	I 600 1.0782	333.9 0.500	2183.52 114.9	0.160 148.0	135.3 2017.284	148.5 0.520 148.1 0.523	TOKOVININ	
- 17342-1910	B 1863 AB 3.0672	117.4 0.166	2010.25 62.6	0.900 260.0	69.4 2019.534	98.0 0.105 99.5 0.109	TOKOVININ	
17362-1752	YSC 158 28.6853	12.550 0.072	2013.528 70.8	0.119 132.7	102.8 2019.3776	85.9 0.062 96.1 0.075	DOCOBO et al. (3)	
- 18092+3129	COU 812 0.8174	440.4 1.555	2043.08 79.3	0.785 250.5	96.6 250.5 2016.646	266.5 0.646 267.0 0.642	LING et al. (4)	
- 18126+1224	HDS 2570 4.2353	85.0 0.158	2009.87 73.0	0.450 149.6	132.2 2019.536	342.3 0.067 348.9 0.061	TOKOVININ	
18126+1224	HDS 2570 9.2676	38.85 0.155	2016.14 80.5	0.382 168.8	145.8 2019.5363	343.4 0.058 358.9 0.038	DOCOBO et al. (3)	
11906 18591+2230	HU 332 0.2030	1773.7 2.338	1849.71 76.9	0.906 301.2	159.7 2016.603	269.0 0.528 269.4 0.531	LING et al. (4)	
- 19036-7224	HDS 2703 3.6000	100.0 0.319	2017.37 115.5	0.580 120.6	186.8 2019.375	14.7 0.141 8.9 0.157	TOKOVININ	
- 20300-7739	HDS 2931 2.5714	140.0 0.213	2010.73 38.0	0.645 309.3	54.7 2019.375	92.0 0.119 96.8 0.123	TOKOVININ	
- 20406+1539	HDS 2947 20.3533	17.688 0.139	2014.815 104.3	0.749 158.3	101.6 2019.539	113.1 0.169 111.1 0.192	TOKOVININ	
- 21114-5220	HU 1626 2.3085	155.9 0.841	2049.18 149.9	0.610 160.0	127.0 2018.400	106.0 0.924 104.7 0.904	TOKOVININ	
14766 21133+4655	A 884 1.0405	346.0 0.470	1831.86 123.2	0.567 102.1	48.9 2016.606	109.0 0.441 108.5 0.442	LING et al. (4)	

NEW ORBITS (continuation)							
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2019 2020	Author(s)
- 21158-5316	FIN 329 9.7655	36.86 0.176	2003.19 112.8	0.054 160.2	81.3 2018.400	96.0 0.158 91.7 0.170	TOKOVININ
- 21208-4049	HDS 3039 11.1322	32.34 0.265	2019.76 106.1	0.390 146.5	200.7 2019.378	28.6 0.145 20.6 0.168	TOKOVININ
15215 21410+2920	STT 448 1.4742	244.2 0.482	2017.12 133.0	0.699 336.7	36.3 2008.67	30.3 0.154 23.4 0.158	ALZNER
- 21533-4650	FIN 374 12.4267	28.97 0.089	2005.20 97.6	0.800 26.0	132.2 2019.529	308.4 0.144 308.0 0.140	TOKOVININ
- 22124-1412	HDS 3152 3.4340	104.8 0.528	2034.9 77.5	0.160 152.5	257.3 2019.539	327.7 0.111 345.8 0.104	TOKOVININ
- 22234-4324	HDS 3173 4.3902	82.0 0.171	2016.32 142.7	0.327 189.0	196.7 2019.539	341.2 0.110 333.1 0.108	TOKOVININ
- 22266-1645	SHJ 345AB 0.1800	2000.0 10.330	2021.21 37.1	0.878 162.9	288.4 2019.539	88.8 1.226 93.7 1.238	TOKOVININ
- 22441+0644	TOK 703 71.7240	5.019 0.059	2015.926 134.3	0.316 166.5	168.7 2019.949	115.9 0.044 352.6 0.040	TOKOVININ
16428 22592+1144	STT 483 1.4157	254.3 0.709	2024.27 27.5	0.355 7.2	34.5 2016.658	28.9 0.460 31.7 0.459	ALZNER

- (1) ALZNER, ARGYLE & HORCH
- (2) SCARDIA, PRIEUR, PANSECCHI, LING, ARGYLE, ARISTIDI, ZANUTTA, MACCARINI, ABE, BENDJOYA, RIVET, SUAREZ & VERNET
- (3) DOCOBO, MÉNDEZ, CAMPO, COSTA & GÓMEZ
- (4) LING, SCARDIA, PRIEUR, PANSECCHI, ARGYLE, ARISTIDI, ZANUTTA, MACCARINI, ABE, BENDJOYA, RIVET, SUAREZ & VERNET

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 ($^{\circ}$)	ρ ($''$)	Notes
SCA 193 Aa,Ab	13 05 00.78 +13 04 09.7	11.1 - 11.4	2020.215	341.2	0.30	AB is J 2103
SCA 194 AC	11 16 07.34 +01 35 12.1	9.0 - 11.6	2020.256	178.9	2.824	AB is STF 1522
SCA 194 BC	11 16 07.34 +01 35 12.1	11.0 - 11.6	2020.256	204.0	0.431	
SCA 195 Aa,Ab	14 12 43.27 +25 46 52.9	11.3 - 11.7	2020.259	230.4	0.16	AB is COU 480
SCA 196 AC	11 07 43.26 +52 17 05.8	11.9 - 13.5	2020.278	76.0	3.12	AB is DAM 1440
SCA 196 BC	11 07 43.26 +52 17 05.8	12.1 - 13.5	2020.278	80.4	1.0	
SCA 197 AC	14 14 50.85 +10 06 02.2	5.4 - 10.0	2020.311	109.5	1.042	AB is KUI 66
SCA 197 BC	14 14 50.85 +10 06 02.2	8.4 - 10.0	2020.311	134.7	0.17	
SCA 198 AC	15 12 39.40 +34 39 35.2	10.3 - 13.0	2020.376	107.8	6.290	AB is TDS 9446
SCA 199 Aa,Ab	17 24 57.72 +01 07 35.9	11.0 - 11.0	2020.399	158.8	0.16	AB is RST 5431

NOTE

Precise identification

Marco Scardia and Luca Maccarini identified the pair, COU 2552, whose precise coordinates are missing in the WDS, along with the star, TYC 3290-1518-1 (01 30 35.88 +51 32 27.0 Eq. 2000). An observation made at Calern observatory using the Epsilon+PISCO telescope on January 11, 2020, confirmed the identification.

Marco Scardia

The deadline for contributions to Information Circular No. 202 is:

October 15th 2020

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