



Orbital elements of double stars: ADS 7704 and A 1101 AB

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

► To cite this version:

Marco Scardia, Jean-Louis Prieur, Luigi Pansecchi, Robert W. Argyle, Josefina Ling, et al.. Orbital elements of double stars: ADS 7704 and A 1101 AB. 2018, pp.1. hal-02357204

HAL Id: hal-02357204

<https://hal.science/hal-02357204>

Submitted on 23 Nov 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

INTERNATIONAL ASTRONOMICAL UNION
COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)
DOUBLE STARS INFORMATION CIRCULAR No. 196 (OCTOBER 2018)

NEW ORBITS

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2018 2019	Author(s)
449 00324+0657	MCA 1 Aa,Ab 13°1042	27 ^y 47 0"159	1988.99 111°3	0.811 14°3	106°1 2014.7538	305°1 0"074 297.2 0.120	JOSTIES & MASON
- 01108+6747	HDS 155 48.3027	7.453 0.083	1995.500 52.0	0.744 215.0	151.8 2013.8084	68.3 0.017 150.4 0.091	DOCOBO et al. (*)
- 01197+1209	CHR 196 8.0536	44.7 0.158	2023.0 101.9	0.95 61.7	153.3 2018.564	281.0 0.039 269.2 0.029	TOKOVININ
- 01263-0440	TOK 204 58.8235	6.120 0.073	2015.457 20.8	0.416 157.5	45.6 2018.564	36.8 0.101 66.7 0.085	TOKOVININ
- 01312-0702	HDS 198 6.9767	51.6 0.176	2028.8 107.3	0.70 42.4	18.5 2018.564	146.1 0.078 137.2 0.067	TOKOVININ
1538 01559+0151	STF 186 2.1635	166.40 1.023	1893.05 73.8	0.721 42.2	220.1 2017.8232	72.7 0.680 73.7 0.659	JOSTIES & MASON
- 02136-5721	HDS 296 4.7809	75.3 0.175	2023.8 74.2	0.40 41.3	100.9 2018.564	97.5 0.116 100.3 0.114	TOKOVININ
- 02201-0332	HDS 305 Aa,Ab 14.9501	24.08 0.122	1998.53 40.8	0.387 318.2	165.4 2018.734	17.4 0.100 36.6 0.080	TOKOVININ
- 02262+3428	HDS 318 51.8956	6.937 0.099	2015.822 49.9	0.291 2.8	16.0 2012.6777	169.1 0.102 192.2 0.127	DOCOBO et al. (**)
- 02290-1959	RST 2280 Aa,Ab 11.5793	31.09 0.570	2020.56 151.6	0.705 51.1	197.3 2018.734	236.6 0.285 194.2 0.194	TOKOVININ
- 02305-4342	ELP 1 Aa,Ab 35.2941	10.2 0.130	2020.6 124.9	0.334 82.1	122.6 2018.564	130.7 0.118 99.2 0.081	TOKOVININ

NEW ORBITS (continuation)							
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2018 2019	Author(s)
- 02544-2007	HDS 371 2.7272	132.0 0.350	2022.3 120.0	0.303 118.4	116.3 2018.734	5.5 0.130 356.5 0.136	TOKOVININ
2236 02572+0153	A 2413 2.7839	129.31 0.659	1930.68 71.0	0.452 104.1	185.5 2017.6781	165.9 0.624 166.8 0.631	JOSTIES & MASON
- 03271+1845	CHR 10 AB 21.2766	16.92 0.079	1995.03 45.0	0.044 214.8	91.7 2018.734	99.9 0.081 114.8 0.077	TOKOVININ
- 03309-6200	TOK 190 97.2973	3.700 0.0576	2016.02 73.3	0.80 122.2	51.6 2018.734	41.1 0.064 272.8 0.017	TOKOVININ
3114 04182+2248	STF 520 1.5406	233.7 0.536	1971.76 27.4	0.865 124.4	155.1 2017.6781	82.2 0.662 82.7 0.669	JOSTIES & MASON
4038 05272+1758	MCA 19 Aa,Ab 22.6672	15.882 0.075	2014.570 110.3	0.806 317.2	251.4 2015.9089	108.0 0.055 101.2 0.070	JOSTIES & MASON
6650 08122+1739	STF 119 6AB 6.0018	59.98 0.865	1988.95 172.2	0.322 352.6	181.3 2018.0714	11.7 1.142 8.5 1.143	JOSTIES & MASON
- 09024-6624	TOK 197 552.5710	0.6515 0.0321	2015.596 101.7	0.042 250.0	105.2 2018.482	110.4 0.029 289.7 0.030	TOKOVININ
- 09474+1134	MCA 34 AB 23.6788	15.204 0.111	1973.488 76.2	0.310 20.8	203.4 2018.2518	196.0 0.074 207.3 0.074	JOSTIES & MASON
7545 09521+5404	STT 208 3.4413	104.6 0.329	1987.52 19.4	0.436 33.3	132.5 2017.2773	310.0 0.412 311.8 0.417	JOSTIES & MASON
7704 10163 +1744	STT 215 0.5125	702.4 1.035	1826.63 180.0	0.707 116.5	90.6 2018.224	176.3 1.499 176.1 1.503	SCARDIA et al. (***)
- 11053-2718	FIN 47 AB 47.6304	7.558 0.135	2043.918 95.7	0.342 338.5	224.2 2016.9587	45.0 .177 42.1 0.151	JOSTIES & MASON
- 13117-2633	FIN 305 18.0270	19.97 0.095	2022.103 180.0	0.941 0.0	273.4 2018.238	78.8 0.122 74.2 0.098	TOKOVININ
- 13145-2417	FIN 297 AB 5.9622	60.38 0.245	2018.150 67.3	0.732 111.5	10.8 2018.238	180.8 0.069 194.4 0.098	TOKOVININ

NEW ORBITS (continuation)								
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2018 2019	Author(s)	
- 13598-0333	HDS 1962 36.9610	9.74 0.073	2008.325 52.4	0.355 232.2	32.1 2018.164	346.1 0.042 22.6 0.073	TOKOVININ	
9185 14158 +1018	A 1101 AB 10.1724	35.39 0.260	2000.72 122.6	0.825 301.3	2.3 2018.315	224.7 0.327 222.7 0.333	SCARDIA et al. (***)	
9397 14492+1013	A 2983 35.9640	10.010 0.123	2018.174 43.5	0.518 335.9	144.8 2015.3381	107.2 0.053 195.9 0.069	DOCOBO et al. (****)	
9532 15122-1948	B 2351 Aa,Ab 15.3377	23.472 0.129	1971.115 154.9	0.249 339.7	173.0 2018.2358	193.0 0.096 169.2 0.099	JOSTIES & MASON	
- 16076+0002	HDS 2276 2.18	165 0.600	2022.86 69.2	0.847 180.1	172.1 2018.183	232.6 0.082 264.2 0.060	TOKOVININ	
- 17372+2754	KUI 83 AB 14.9375	24.10 0.290	1961.17 164.9	0.215 17.0	328.0 2008.5450	165.4 0.335 155.1 0.344	JOSTIES & MASON	
11640 18455+0530	FIN 332 Aa,Ab 12.9799	27.74 0.092	1992.97 107.5	0.843 347.3	130.6 2018.2555	303.0 0.076 298.5 0.051	MASON (1,3)	
11640 18455+0530	FIN 332 B,aBb 9.0183	39.92 0.151	1964.69 105.1	0.908 294.1	112.0 2018.2555	332.6 0.103 330.6 0.109	MASON (2,3)	
11897 18575+5814	STF 2438 1.3761	261.6 1.051	1885.89 114.1	0.980 86.0	257.8 2017.6743	357.4 0.860 357.2 0.859	JOSTIES & MASON	
12972 19487+3519	STT 387 2.0218	178.1 0.688	1831.36 129.4	0.081 41.2	153.2 2017.6744	103.7 0.466 100.9 0.458	JOSTIES & MASON	
- 20048+0109	TOK 699 45.9770	7.83 0.164	2018.62 40.5	0.256 47.6	74.3 2018.733	148.3 0.097 222.1 0.141	TOKOVININ	
- 20552-3008	HDS 2980 8.2379	43.7 0.099	2019.0 45.3	0.616 86.5	137.7 2018.733	223.1 0.027 275.5 0.035	TOKOVININ	

(1) Using Hipparcos 2 parallax (van Leeuwen, F. 2007, A&A 474, 653), Mass sum of these two A stars is 10.60 ± 8.57 . Possible, but not too valuable due to parallax error.

(2) Using Hipparcos 2 parallax (van Leeuwen, F. 2007, A&A 474, 653), Mass sum of these two A stars is 14.52 ± 8.40 . Possible, but not too valuable due to parallax error.

(3) Coplanarity? $\phi = 17.953 \pm 3.738$ (if $\phi < 15$; Fekel, F.C. 1981, ApJ 246, 879)

NEW ORBITS (continuation)								
ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	2018 2019	Author(s)	
- 21041+0359	TOK 371 27.0677	13.30 0.104	2011.21 20.4	0.29 319.8	79.8 2018.402	239.0 0.130 255.1 0.125	TOKOVININ	
14783 21137+6424	HI 148 4.3807	82.18 0.609	2003.01 82.6	0.744 34.3	63.4 2017.6788	243.7 0.738 244.0 0.763	JOSTIES & MASON	
15251 21426+4103	BU 688 AB 3.3665	106.9 0.673	1947.53 95.9	0.986 106.7	182.8 2017.6746	199.1 0.429 199.0 0.428	JOSTIES & MASON	
- 22084-4403	HDS 3146 9.7297	37.0 0.122	2014.24 134.4	0.60 48.2	177.7 2018.403	7.4 0.108 1.2 0.122	TOKOVININ	
15701 22109+4211	A 2494 2.5352	142. 0.290	2029.9 68.7	0.940 291.1	212.1 2014.5688	11.1 0.191 11.8 0.184	RICA	
- 22156-4121	CHR 187 18.6431	19.31 0.168	1991.67 68.3	0.000 0.0	77.1 2018.403	244.9 0.149 252.8 0.165	TOKOVININ	
- 22220-3431	B 557 Aa,Ab 2.9484	122.1 0.380	2016.3 113.9	0.910 78.5	210.4 2017.8232	20.2 0.126 16.4 0.149	RICA	
17111 23568+0444	A 2100 4.0350	89.22 0.271	1990.75 159.0	0.761 56.3	112.9 2017.6939	254.3 0.413 253.3 0.419	JOSTIES & MASON	

(*) DOCOBO, BALEGA, CAMPO & ABUSHATTAL

(*) DOCOBO, BALEGA & CAMPO

(***) SCARDIA, PRIEUR, PANSECCHI, ARGYLE, LING, ARISTIDI, ZANUTTA, ABE, BENDJOYA, RIVET, SUAREZ & VERNET

(****) DOCOBO, CAMPO & ABUSHATTAL

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)
Kepler-195	1.52 ± 0.02	1.94 ± 0.05	-17.36 ± 0.04	-23.47 ± 2.91
companion	1.51 ± 0.02	1.91 ± 0.04	-17.38 ± 0.04	-
GQ Lup	6.59 ± 0.05	-14.26 ± 0.10	-23.60 ± 0.07	-
companion	5.49 ± 0.46	-14.81 ± 0.97	-21.95 ± 0.65	-

Other values for 2015.5

	Kepler-195 companion	GQ Lup companion
magnitude	12.94	18.37 (*)
θ	$34^\circ 1$	$114^\circ 6$
ρ	$10'' 256$	$16'' 113$

(*) G-magnitude listed in GAIA-DR2

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 ($''$)
SCA 187	22 19 46.19 +52 17 58.8	12.8 - 12.8	2018.665	187.9	5.285
SCA 188	22 20 10.21 +52 16 13.8	12.5 - 12.5	2018.717	86.6	7.931
SCA 189	22 20 31.06 +52 16 36.2	13.0 - 13.3	2018.717	90.4	5.656

NOTES

Identification

The binary, A 866 Ba,Bb, was last observed in 1981, however, the identification and coordinates were doubtful. This pair was observed again on September 27 and 28 of 2018 from the Calern Observatory (France) with the Pisco camera and the Epsilon telescope. It has now been identified as BD +572131.

Marco Scardia

The deadline for contributions to Information Circular No. 197 is:

February 15th 2019

J. A. Docobo (joseangel.docobo@usc.es) [1,2]

J. F. Ling (josefinaf.ling@usc.es) [1]

Tel: +34 881 815 016

[1] Observatorio Astronómico R. M. Aller
P. O. Box 197
<http://www.usc.es/astro>
Universidade de Santiago de Compostela
SPAIN

[2] Real Academia de Ciencias de Zaragoza
Facultad de Ciencias
C/ Pedro Cerbuna, 12
50009 Zaragoza
SPAIN