



Orbital elements of double stars: ADS 11111

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INTERNATIONAL ASTRONOMICAL UNION

COMMISSION G1 (BINARY AND MULTIPLE STAR SYSTEMS)

DOUBLE STARS INFORMATION CIRCULAR No. 200 (FEBRUARY 2020)

NEW ORBITS

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2020 2021	Author(s)
- 00121-5832	RST 4739 9°41'78"	38 ^h 23 0 ^m 22 ^s	2027.97 155°6	0.551 275°8	50°1 2018.5619	267°1 0'250 260.9 0.234	CVETKOVIC
- 02402+0436	HDS 347 0.9926	362.7 0.800	2346.36 35.0	0.631 81.5	135.2 2018.7317	326.1 0.622 327.1 0.632	CVETKOVIC
3391 04433+5931	A 1013 2.7298	131.88 0.282	1981.69 29.0	0.776 57.8	83.0 2014.2010	300.6 0.415 301.3 0.419	DOCOBO & LING
- 06499-2806	HDS 947AB 7.5229	47.85 0.168	2016.04 55.6	0.212 231.8	22.5 2018.8438	304.7 0.080 321.5 0.088	CVETKOVIC
- 07312+0210	TOK 393 66.3262	5.428 0.061	2015.432 156.4	0.075 182.4	70.1 2018.9725	310.3 0.055 238.0 0.056	CVETKOVIC
- 08259-1623	HDS 1199 4.2718	84.28 0.787	2035.19 130.6	0.286 50.6	112.2 2018.0714	147.3 0.624 143.1 0.630	CVETKOVIC
- 17161+2316	COU 315 1.0601	339.59 0.936	2011.13 99.1	0.962 79.6	124.8 2012.4406	294.5 0.271 294.0 0.283	DOCOBO & CAMPO
11111 18096+0400	STF 2281AB 0.9860	365.1 1.420	1912.94 101.8	0.670 310.2	71.3 2018.539	282.7 0.771 282.2 0.784	SCARDIA et al. (*)
- 20462-2145	HDS 2957 2.8425	126.65 1.010	2021.06 64.3	0.363 116.6	93.6 2018.4004	223.1 0.341 232.2 0.379	CVETKOVIC

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

NEW DOUBLE STARS

Discovered by André Debackère using LCO global telescope network.

- FTN : Faulkes Telescope North T2m, Haleakala, Hawaii, LCO
- FTS : Faulkes Telescope South T2m, Siding Spring, Australia, LCO

STAR	Precise Coord	GAIA-DR2	G Mag.	Plx e-plx	pmRA e-pmRA	pmDE e-pmDE	Epoch	θ ($^{\circ}$)	ρ ($''$)	Obs
DBR 321 A	155301.460+125512.42	1191503852960624640	14.44	3.8108	-38.736	18.360	2019.639	323.82	3.141	1FTN
B	155301.334+125514.92	1191503852960684160	15.02	0.0291	0.045	0.035		± 0.20	± 0.011	
				3.8835	-38.516	18.524				
				0.0465	0.077	0.057				
DBR 322 A	183348.499+423502.52	2111672627300946560	13.00	2.7059	0.995	1.028	2019.637	130.15	2.453	1FTN
B	183348.670+423500.93	2111672627300946688	13.61	0.0159	0.030	0.031		± 0.09	± 0.004	
				2.7077	1.175	1.384				
				0.0145	0.026	0.028				
DBR 323 A	204329.169-252336.25	6806095590049064960	14.37	0.8637	0.075	-3.321	2019.777	175.19	2.225	1FTS
B	204329.181-252338.47	6806095590049064832	14.48	0.0348	0.055	0.032		± 0.10	± 0.006	
				0.8352	0.099	-3.170				
				0.0354	0.056	0.033				

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 192 AC	23 11 00.56 +38 16 58.9	11.5 - 12.5	2019.766	138.0	1.627	AB is COU 1199
SCA 192 BC	23 11 00.56 +38 16 58.9	11.8 - 12.5	2019.766	240.9	0.871	

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NOTE

“MIEUX VOIR LES ÉTOILES - LE 1ER SIÈCLE DE L'INTERFÉROMÉTRIE OPTIQUE ”

Daniel Bonneau's book published by EDP Sciences in the Science and History collection.

This story begins around 1850 with Hippolyte Fizeau who expresses the idea of using the phenomenon of light interference to achieve the measurement of stars by means of optical interferometry. After the first experiments carried out by Edward Stephan in 1873, Albert Michelson succeeded in 1891 in the first interferometric measurements. But it was only between 1920 and 1937 that Michelson and Francis Pease obtained the first measurements of star diameter using the two interferometers of the Mount Wilson Observatory. Between the years 1920 and 1970, following the invention of the ocular interferometer by John Anderson, the interferometric method will continue to be used by some astronomers for the measurement of double stars. In the 1960s, technical progress allowed the design of new stellar interferometers, contributing to the renaissance of optical interferometry according to Fizeau and Michelson. A new era began in the 1970s, particularly with the invention by Antoine Labeyrie of scab interferometry that achieves the theoretical resolution of telescopes despite the degradation of images by atmospheric turbulence. Finally, the construction in 1974 of the first interferometer with two independent telescopes, also due to Antoine Labeyrie, marks the end of the first century in the history of optical interferometry. This has resulted in considerable developments in long-baseline optical interferometry discussed in the last chapter of this book. The objectives dreamed up by Fizeau have been surpassed, the use of large interferometric telescope arrays allowing astronomers to obtain real images of stars by opening synthesis. This book evokes the years during which the first applications of optical interferometry to astronomical observations were tried, through the men who got involved, the instruments they implemented and the results they obtained. Browsing through these pages, the reader will measure the path to that at the beginning of the twenty-optical interferometry has become an essential tool of astrophysics alongside photometry and spectroscopy.

The author is Honorary Astronomer at the Observatory of the Cte d'Azur, volunteer collaborator at the Lagrange Laboratory.

This book is on sale at the EDP Sciences boutique: <https://laboutique.edpsciences.fr/theme/809/Astronomie>

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The deadline for contributions to Information Circular No. 201 is:

June 15th 2020

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