

ORBIT OF BINARY STAR ADS 16904,A 643

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SUMMARY: This paper presents the orbital elements of the visual binary star ADS 16904 =A 643. For the pair are given the dynamical parallax, the masses, the absolute magnitudes, the measures, the (O-C) and the ephemerides.

The orbital elements of the binary star ADS 16904 have been computed by using the Thiel-Innes and Van den Bos (1926) methods. The dynamical parallax was computed by use of the Baize and Romani (1946) method with magnitudes and spectral

types taken from the Lick Index Catalogue of Visual Double Stars, 1961.0 (Jeffers, 1963). The orbital elements with the dynamical parallax, the total mass, the absolute magnitudes and the major axis are given in Table 1, the ephemerides in Table 2, the measures and the comparison with the measures in Table 3.

Table 1 Orbital elements

P = 238.12	$\pi_{\text{dyn.}}$ = 0".03	A = +0".2400
n = 1.5119	a = 50 (AU)	B = +0.0745
T = 1835.51	\mathcal{M}_{AB} = 2.2 \mathcal{M}_{\odot}	F = +0.0583
e = 0.03	M_{A} = 2.0 abs.mag.	G = -0.1878
a = 0.25	M_{B} = 2.0 abs.mag.	C = 0.0000
i = 141° 49	T_{Ω} = 2073.63	H = -0.1557
Ω = 17° 25		
ω = 0° 00		

Table 2

Ephemerides

t	P	ρ	t	P	ρ
1995.00	145° 7	0" 22	2000.00	137° 4	0" 21
1996.00	144.1	0.22	2001.00	135.7	0.21
1997.00	142.5	0.21	2002.00	134.0	0.21
1998.00	140.8	0.21	2003.00	132.2	0.21
1999.00	139.1	0.21	2004.00	130.5	0.20

Table 3

Observations and residuals

t	P	ρ	mag	n	Obs	(O-C)P	(O-C) ρ
1903.93	264° 4	0" 21	7.9-8.0	3	A	- 1" 8	+0" 01
1911.63	251.6	0.19		1	A	- 1.3	-0.02
1916.94	247.5	0.23		3	A	+ 3.1	+0.01
1921.55	241.6	0.22		2	A	+ 4.0	-0.01
1934.67	224.0	0.24		2	A	+ 3.8	-0.01
1944.83	219.0	0.23	8.5-8.5	2	VBs	+ 10.8	-0.03
1953.75	202.2	0.26		3	MULL	+ 4.0	0.00
1956.86	195.8	0.27		2	COU	+ 1.1	+0.01
1959.84	191.0	0.27		3	COU	- 0.4	+0.01
1962.78	190.8	0.24		5	HEI	+ 2.8	-0.02
1965.49	181.7	0.22		2	COU	- 3.2	-0.03
1966.26	195.5	0.24		2	MULL	+ 11.4	-0.01
1973.237	182.0	0.26		4	WOR	+ 6.2	+0.01
1983.710	165.7	0.235		1	McAL	+ 3.4	0.00
1985.837	157.3	0.226		1	McAL	- 2.1	0.00
1986.891	156.4	0.225		1	McAL	- 1.5	0.00
1987.754	155.2	0.229		1	McAL	- 1.5	0.00

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**ПУТАЊСКИ ЕЛЕМЕНТИ ВИЗУЕЛНО ДВОЈНЕ ЗВЕЗДЕ
ADS 16904 = A 643**

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Стручни рад

Користећи микрометарска и интерферометриска мерења за Двојну звезду ADS 16904 одређени су путањски елементи, маса, паралакса као и друге астрофизичке величине.