

Micrometer measurements of southern double stars made at the Observatory of Llano del Hato at Merida (Venezuela)

C. Prieto^{1,2}

¹ Observatorio Astronómico "Ramón María Aller", P.O. Box 197, Universidade de Santiago de Compostela, Spain

² Dpto. Matemática Aplicada, Universidade de Vigo, Spain
e-mail: oacris@usc.es

Received May 20; accepted June 3, 1996

Abstract. We present 93 micrometer measurements of 46 double stars observed with the 65 cm refractor at the Llano del Hato Observatory (Merida, Venezuela).

Key words: binaries: visual — astrometry

1. Introduction

The observations reported here were made at the Llano del Hato Observatory of the Center of Investigation in Astronomy (CIDA) at Merida (Venezuela) during a run in February 1996.

The instrument used was a Zeiss refractor (aperture 65 cm, focal length 10.6 m) equipped with a wire micrometer. Since the last run of visual double stars with this instrument (Valbousquet 1980) some changes were required at the micrometer, fitted up a new micrometer screw with angular equivalent of the pitch of $0''0197$ per division. We obtain this value with different forms of calibration.

In this first run in Llano del Hato has been proved that this instrument is a very useful instrument for the observation of double stars. Its optics and mechanical parts are both excellent.

In general visual conditions were very favourable and the seeing was between $0''5$ and $2''0$ even sometimes was around $0''35$.

2. Observations

The 93 micrometer measurements of 46 southern double stars are listed in Table below in the usual format:

Column 1 shows the star's WDS catalogue number (Worley & Douglass 1984) and subsequent columns the star's name and ADS catalogue number if it has (Aitken 1932), the epoch of the observation, the position angle (θ), angular separation ρ and the number of nights on which the star was observed.

When a star was observed more than one night the values of θ and ρ are the means of all the observations made. In no case did the measurements averaged differ by more than 2^0 for positions or $0''10$ for angular separation.

All the stars has at least one orbit calculated, some of them must be revised.

Acknowledgements. I wish to express my warmest thanks to the staff of CIDA for all the facilities made available for our work especially to Dr. Carlo Abad for his help personal and technic which was essential for us. This work was financed by the research projects XUGA 24301B92 and PB92-1074 directed by Prof J.A. Docobo and supported by Xunta de Galicia and D.G.I.C.Y.T. respectively.

References

- Aitken R.G., 1932, New General Catalogue of Double Stars (A.D.S.) Carnegie Institution of Washington No. 417
- Valbousquet A., 1980, A&AS 40, 347-350
- Worley C.E., Douglass G.G., 1984, The Washington Visual Double Star Catalog, 1984.0 Pub. U.S. Nav. Obs.

Table 1.

WDS	Name	ADS	1990.+	θ	ρ	No. nights
04149 S 4608	RST 2338		6.165	317 ⁰ 6	0 ⁰ 35	2
04269 S 2404	BU 311	3230	6.165	132.4	0.59	2
04403 S 5856	HJ 3683		6.168	270.2	3.54	2
04589 S 1623	BU 314	3588	6.165	323.1	0.74	2
05059 S 1355	A 3009	3686	6.167	250.5	1.09	2
06004 S 3103	HU 1399 AB		6.164	293.4	0.57	1
06004 S 3103	HJ 3823 AB-C		6.167	6.6	2.13	2
06048 S 4827	DUN 23		6.164	117.1	2.24	1
06299 S 5014	R 65		6.167	268.1	0.71	1
06299 S 5014	HDO 195		6.164	262.0	0.49	1
06546 S 2733	B 706		6.165	286.8	0.94	1
07148 S 1528	BU 575	5925	6.165	279.7	0.66	2
07175 S 4700	I 7		6.165	213.0	0.90	2
07430 S 1704	HU 710	6315	6.165	80.0	0.46	2
07517 S 1353	BU 101	6420	6.165	303.5	0.48	2
08392 S 2240	BU 208	6914	6.165	33.6	1.28	2
08432 S 1225	RST 3603		6.165	352.0	0.41	2
09001 S 1227	HU 225	7131	6.168	243.1	0.50	2
09278 S 0604	B 2530		6.165	145.6	0.40	2
09313 S 1329	KUI 41		6.168	263.8	0.72	2
09308 S 4028	COP		6.162	211.1	0.45	2
10043 S 2823	I 292	7629	6.165	315.8	0.54	2
10163 S 2859	I 851	7706	6.165	237.8	0.46	2
10361 S 2640	BU 411	7846	6.157	308.9	1.29	2
10373 S 4813	SEE 119		6.161	272.0	0.48	2
11209 S 5430	I 879		6.168	129.6	0.30	2
11248 S 6139	BSO 5		6.167	242.2	4.35	1
11272 S 1539	HU 462	8166	6.160	241.3	0.70	2
11369 S 1221	BU 456	8239	6.160	149.4	0.93	2
11532 S 1540	A 2579	8332	6.167	50.6	0.39	2
12018 S 3439	I 215		6.157	90.5	0.66	2
12036 S 3900	SEE 143		6.159	71.7	0.85	2
12154 S 3105	RST 1658		6.164	95.1	0.64	2
12301 S 1323	BU 28	8573	6.157	329.7	1.79	2
12397 S 3717	DAW 63		6.171	30.3	0.49	2
12415 S 4858	HJ 4539		6.157	346.6	1.02	2
12463 S 6806	R 207		6.162	36.8	1.43	1
12567 S 4742	I 83		6.167	230.9	0.90	2
13371 S 6142	I 365		6.160	105.0	0.40	2
13535 S 3540	HWE 28		6.167	306.3	0.83	2
13570 S 2732	I 234	9064	6.164	233.5	0.65	2
14403 S 6051			6.156	219.6	16.4	1
14542 S 6625	HJ 4707		6.167	286.7	0.89	2
15233 S 5920	HJ 4757		6.160	196.2	0.75	2
15262 S 2819	RST 769		6.164	197.9	0.41	1
15351 S 4111	HJ 4786		6.164	275.8	0.80	1