INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26 (DOUBLE STARS)

INFORMATION CIRCULAR No. 139 (OCTOBER 1999)

NEW ORBITS

ADS	Name	P (yr)	T	e	W(2000)	1999	Author
RA 2000 DEC	n (deg)	a (")	i (deg)	w (deg)	Last ob.	2000	
281	BU 1015	125.41	1961.64	0.522	302.7	96.0 0.421	SEYMOUR &
00206+1219	2.8707	0.325	29.5	359.2	1996.6510	97.2 0.426	HARTKOPF
732	A 2307	57.67	1956.32	0.515	218.4	59.3 0.189	SEYMOUR &
00533+0405	6.2429	0.228	72.5	15.1	1995.9316	61.8 0.171	HARTKOPF
1077	A 313	131.16	2018.40	0.160	168.8	349.1 0.252	SEYMOUR
01196-0520	2.7448	0.273	130.1	249.2	1997.0300	347.1 0.250	& MASON
3465	A 2621	310.47	1699.04	0.372	90.0	101.4 0.134	SEYMOUR &
04496+0212	1.1595	0.212	45.8	44.2	1993.0924	103.3 0.133	HARTKOPF
3596	STT 93	1467.52	1914.22	0.649	241.3	245.1 1.348	SEYMOUR
05005+0506	0.2453	2.530	99.7	249.3	1997.1541	245.0 1.362	& MASON
4115	STF 728	613.69	2297.03	0.221	217.1	46.1 1.161	SEYMOUR &
05308+0557	0.5866	1.604	96.6	302.5	1998.0900	46.0 1.172	HARTKOPF
5949	A 2855	65.68	1958.26	0.200	52.6	236.4 0.406	SEYMOUR
07168+0059	5.4814	0.350	144.3	325.2	1991.8970	233.1 0.403	& MASON
6347	HO 247	350.80	1892.44	0.291	117.2	246.3 0.454	SEYMOUR &
07461+2107	1.0262	0.561	52.9	339.8	1995.9216	247.2 0.459	HARTKOPF
	COU 966	90.43	2036.13	0.304	63.6	42.5 0.161	MANTE
12316+3201	3.9811	0.126	172.4	183.0	1997.268	40.2 0.160	
9220	A 1102	393.07	1931.22	0.531	252.4	93.0 0.458	SEYMOUR
14179+6914	0.9159	0.458	138.6	29.3	1994.4500	92.4 0.452	& MASON
	COU 1289	15.99	2001.05	0.832	58.2	57.9 0.080	DOCOBO
16584+3943	22.5141	0.076	116.4	149.1	1996.4320	50.2 0.050	& LING
	COU 1289	37.63	2024.43	0.183	74.2	240.0 0.088	DOCOBO
16584+3943	9.5668	0.137	99.9	102.3	1996.4320	235.3 0.073	& LING
	COU 1785	34.83	1997.67	0.413	51.7	240.7 0.052	DOCOBO
18035+4032	10.3359	0.130	82.4	195.0	1995.6115	254.5 0.029	& LING

12540 McA 55 Aa 96.84 2010.27 0.719 98.8 131.2 0.375 HARTKOPF
19307+2758 3.7174 0.586 118.0 77.2 1997.4603 128.2 0.369

CHR 87 69.04 1996.73 0.212 183.1 86.3 0.076 HARTKOPF
19336+3846 5.2144 0.157 52.4 247.4 1997.4602 99.3 0.077

13961 SEE 512 88.39 1960.25 0.104 127.8 271.4 0.092 SEYMOUR
20325-1637 4.0729 0.277 100.6 94.2 1996.5320 263.4 0.079 & MASON

CHR 114 85.25 1991.31 0.252 255.5 223.1 0.123 HARTKOPF
22383+4511 4.2228 0.162 35.9 269.0 1996.5321 228.7 0.128

16708 HU 295 64.62 1941.29 0.140 276.3 259.1 0.219 SEYMOUR &
23227-1502 5.5709 0.408 77.6 354.6 1997.8292 262.7 0.248 HARTKOPF

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SPECKLE CAMERA FOR THE ASTRONOMICAL OBSERVATORY ``RAMON MARIA ALLER"

A speckle camera for wide range of astronomical applications (binary star measurements, in particular) was developed for the Astronomical Observatory ``R. M. Aller" of the University of Santiago de Compostela (Spain) and constructed in cooperation with Special Astrophysical Observatory (Russia). It was successfully tested in Cassegrain focus of the Observatorio Astronomico Nacional 1.52m telescope at Calar Alto (Spain) during a recent observational run in September, 1999.

With the microscope objective magnification 20x the scale at the detector plane was 0.013 arcsec per pixel. A wheel of interference filters is used in the camera for bandpass selection while a set of prisms compensates the atmospheric dispersion.

The detector used is a 3-stage electrostatically focused image intensifier with a 20 mm multialcali photocathode. It is optically coupled with SensiCam CCD camera manufactured by PCO Computer Optics GmbH, Germany.

Up to 5 frames per second (512x512 pix. digitized at 12 bits) can be stored on the hard disk(s) and copied later to an Exabyte Mammoth-LTVDe tape drive.

The camera is completely remote controlled.

The speckle masking image reconstruction procedure will be used to measure relative position of the components in binary system as well as estimate their brightness difference.

First observations of about 100 binaries using the classical speckle technique were performed, and the diffraction limited resolution of 0.08 arcsec at 600 nm was achieved under moderate seeing conditions for all observed pairs. Stars of 10th magnitude were easily observed during the observing run and we expect those of 12th magnitude can be measured at that telescope under better seeing conditions.

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MICROMETER MEASUREMENTS OF VISUAL DOUBLE STARS

In the following Table, 46 measurements of 17 visual binary stars performed with 74 cm (N) and 50 cm (n) refractors at the Cote d'Azur Observatory (France) in June, 1991 are given.

For each star the first measurement has been carried out by J. A. Docobo, the second one by J. F. Ling and the third, if any, by V. Lanchares.

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Table

WDS	Name	ADS +	1991.	theta (deg)	rho (arcsec)	No. nights
13346+1044	BU 612 AB	8987	.433	242.9	0.24	1N
				244.9	0.24	1N
				242.2	0.25	1N
13375+3617	STF 1768 AB	8974	.433	103.6	1.69	1n
				103.6	1.97	1n
				104.4	1.66	1n
14323+2641	A 570	9301	.436	213.4	0.22	1N
				213.1	0.24	1N
14455+4222	STT 285	9378	.433	121.5	0.37	1N
				121.8	0.41	1N
14489+0557	STF 1883	9392	.433	285.7	0.63	1N
				285.6	0.72	1N
				284.0	0.70	1N
14534+1543	STT 288	9425	.433	168.0	1.20	1n
				165.9	1.41	1n
				165.4	1.20	1n
15161-0454	STF 3091 AB	9557	.433	235.7	0.63	1n
				234.4	0.58	1n
				236.3	0.60	1n
15232+3018	STF 1937 AB	9617	.436	30.4	1.03	1N
				30.6	1.04	1N
				29.8	1.04	1N
15416+1941	HU 580 AB	9744	.436	69.6	0.24	1N
				69.5	0.27	1N
16515+0113	STT 315	10230	.436	326.6	0.39	1N
				326.2	0.35	1N
17121+4544	KUI 79 AB		.436	334.9	0.27	1N
				334.7	0.27	1N
				332.8	0.30	1N
18054+2332	STF 2272	11046	.436	206.7	1.61	1N
				207.5	1.67	1N
				205.7	1.56	1N
18433+1847	COU 816		.436	303.5	0.29	1N
				305.1	0.29	1N
				303.5	0.32	1N
18466+3821	HU 1191	11680	.436	288.8	0.28	1N

				290.1	0.25	1N
19394+2216	STF 2556	12752	.436	17.4	0.32	1N
				15.0	0.31	1N
				17.5	0.34	1N
20199+4522	STT 406	13723	.436	110.9	0.46	1n
				111.6	0.52	1n
				111.9	0.42	1n
21439+2751	HO 166	15267	.436	65.3	0.34	1N
				66.4	0.34	1N
				66.4	0.33	1N

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The deadline for contributions to Information Circular No. 140 is:

February 15th 2000

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