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## Orbital elements of double stars: ADS 14424 and 14942

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## INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26

## (DOUBLE STARS)

## INFORMATION CIRCULAR No. 151 (OCTOBER 2003)

## NEW ORBITS

ADS $\alpha$ 2000 $\delta$	Name n	P a	T i	e $\omega$	$\Omega$ (2000) Last ob.	2003 2004	Author(s)
17180 00024+1047	A 1249 2°7751	129 <sup>y</sup> 72 0 <sup>''</sup> 366	1989.44 97°2	0.046 231°4	59°4 1995.9180	131°0 0 <sup>''</sup> 046 112.4 0.055	ZIRM
51 00055+3406	HU 1201 7.6505	47.06 0.138	1983.89 91.5	0.651 23.9	128.1 1998.7798	307.7 0.216 307.6 0.216	ZIRM
2044 02405-2408	SEE 19 1.6936	212.56 0.523	2027.22 112.3	0.899 63.5	177.1 1996.8954	271.3 0.207 269.4 0.201	LING
06579-4417	LPM 248 1.2067	298.34 4.396	1978.30 107.9	0.320 42.2	39.9 1993.9824	283.7 1.136 278.7 1.194	ZIRM
6999 08474-1703	BU 586 0.3741	962.25 0.919	1992.91 65.2	0.672 83.5	71.4 1996.8666	200.4 0.160 204.0 0.168	MANTE
10465-6416	FIN 364 10.0446	35.84 0.145	1989.18 106.0	0.951 122.8	97.9 1993.0903	124.0 0.149 123.2 0.155	MANTE
9909 16044-1122	STF 1998 AB 7.8431	45.90 0.654	2043.12 33.3	0.743 162.2	27.0 2001.5619	330.3 0.557 335.7 0.624	DOCOBO & LING
11640 18455+0530	FIN 332 Aa (I) 7.0644	50.96 0.165	1956.22 96.2	0.032 9.0	313.9 2001.5697	316.4 0.149 315.5 0.155	MASON & HARTKOPF
11640 18455+0530	FIN 332 Aa (II) 13.3284	27.01 0.095	1994.46 105.6	0.798 13.5	137.1 2001.5697	317.0 0.154 316.3 0.160	MASON & HARTKOPF
11640 18455+0530	FIN 332 Aa 6.2157	57.92 0.174	1992.88 98.8	0.166 79.0	131.5 1997.3945	314.6 0.156 313.5 0.164	OLEVIC & CVETKOVIC
11640 18455+0530	FIN 332 Bb (I) 3.5950	100.14 0.170	1973.46 103.8	0.256 108.6	140.5 2001.5697	298.1 0.104 295.8 0.098	MASON & HARTKOPF

**NEW ORBITS (continuation)**

<b>ADS</b> $\alpha$ <b>2000</b> $\delta$	<b>Name</b> <b>n</b>	<b>P</b> <b>a</b>	<b>T</b> <b>i</b>	<b>e</b> $\omega$	$\Omega$ (2000) <b>Last ob.</b>	<b>2003</b> <b>2004</b>	<b>Author(s)</b>
11640 18455+0530	FIN 332 Bb (II) 10.4378	34.49 0.201	1972.65 111.7	0.988 93.3	235.2 2001.5697	297.7 0.095 294.7 0.083	MASON & HARTKOPF
11640 18455+0530	FIN 332 Bb 3.8330	93.92 0.163	1972.23 105.3	0.242 278.6	140.3 1997.3945	117.8 0.109 115.5 0.103	OLEVIC & CVETKOVIC
20302+2651	WOR 9 1.7136	210.09 1.421	1937.47 108.0	0.150 130.8	154.3 1996.626	279.4 0.564 275.9 0.547	ZIRM
20311-1503	FIN 336 8.2803	43.48 0.124	1972.28 55.1	0.593 96.1	170.3 1996.5320	127.7 0.123 131.5 0.123	OLEVIC & CVETKOVIC
20410+3905	MCA 62 Aa 6.3818	56.41 0.134	1974.08 86.2	0.104 330.7	93.6 1988.6631	271.8 0.133 272.2 0.139	OLEVIC & CVETKOVIC
20452-3120	LDS 720 BC 1.7225	209. 3.18	2082. 137.	0.256 36.	50. 1991.46	173.1 3.012 171.8 2.984	HARTKOPF & MASON (x)
14424 20550+2805	BU 367 AB 3.6002	99.99 0.407	1934.17 68.5	0.256 185.0	118.5 2001.707	141.5 0.33 143.6 0.31	SCARDIA et al. (*)
14942 21243+0343	A 2288 3.4071	105.66 0.294	1949.52 130.0	0.623 79.4	130.2 1995.574	235.4 0.31 233.9 0.31	SCARDIA et al. (*)
21477-3054	FIN 330 AB 17.3488	20.75 0.096	1984.64 114.5	0.590 179.3	27.8 1996.8240	343.1 0.044 287.9 0.025	OLEVIC & CVETKOVIC
22248+2233	HO 183 2.9384	122.52 1.315	1972.22 140.4	0.944 348.4	27.9 1996.87	223.9 2.079 223.6 2.109	ZIRM

(\*) SCARDIA, PRIEUR, KOECHLIN and ARISTIDI

(x) NOTE: LDS 720 (WDS 20452-3120) is a high common-proper-motion triple, comprised of an  $\sim 80$  arcminute AB pair and a 3-4 arcsecond BC pair. Following up on a comment by F.M. Rica Romero (Spanish American League of Astron., Circ #1, 2001) orbital analysis of BC determined that several observations in the WDS attributed to it were actually of a similar binary located  $\sim 80$  arcseconds south of LDS 720A. As the first measure of this pair appears to have been by Charles Worley in 1978, it has been designated WDS 20452-3122 = WOR 40.

## Summary of Sydney Business Meeting

C.D. Scarfe

This is a short summary of the business meeting of Commission 26, which took place in the afternoon of July 18, 2003, during the recent IAU General Assembly in Sydney. It was chaired by the outgoing president, C. Scarfe, and was attended by the following: C. Allen, F. Arenou, R. Argyle, A. Boden, J. Davis, F. Fekel, W. Hartkopf, J. Kubát, J. Ling, B. Mason, T. Oswalt, T. Pauls, D. Pourbaix, W. Tango, T. ten Brummelaar, A. Tokovinin, N. Turner, W. van Altena, E. Weis and H. Zinnecker. A more complete report will be published in the IAU Transactions, and a preprint of that report is available on the Commission's website.

C. Scarfe gave a report on events during the past triennium. He announced the deaths, during that period, of members N. Argue, E. Cabrita, M. Herrera, and K. Strand, as well as that of D. Zulevic during the previous triennium, and the meeting observed a few moments of silence in their memory.

Twenty new members have joined the Commission, bringing the total membership to 128, from 34 countries.

The chairman then reported on the recent election, in which just over half the membership voted. For the period 2003 to 2006, the president will be W. Hartkopf, and the vice-president, C. Allen. The OC will be made up of new members J. Davis, E. Oblak and T. Oswalt, along with continuing members F. Fekel, P. Lampens and J. Ling.

The chairman then gave a brief account of IAU Colloquium 191, held in Mérida, Yucatán, México in February 2003, and followed it with some remarks on other proposals for meetings, which had not been accepted by the Executive Committee. He concluded with some comments on the new rules for the conduct of Commission and Division operations.

W. Hartkopf gave a short summary of developments at the Commission's website, and invited suggestions for further improvements. It is intended that the site's URL will remain <http://ad.usno.navy.mil/wds/dsl.html#iau> for the next three years at least.

B. Mason spoke about Special Session 3 on a new classification scheme for double stars. That session had approved a resolution adopting the WDS scheme and encouraging completion of a complete catalogue by the Washington group. The Commission endorsed that resolution, and is currently setting up a Working Group to support that work.

J. Ling discussed the history and current status of the Commission's Information Circulars, which were begun by P. Muller almost fifty years ago. They are now distributed electronically, and their contents are becoming increasingly diverse. They have ISSN number 1024-7769, and are listed as IAUDS on the NASA Astrophysics Data System. Several new directions for the Circulars were discussed.

W. Hartkopf thanked C. Scarfe and the outgoing OC members for their efforts during the past three years, and then turned his attention to the next three. Some possible topics and sites for meetings were discussed, as well as future catalogues and a CDROM that would collect several of the latter together.

There followed several short reports on major new observing facilities and additions to established ones. J. Davis described recent observations with the Sydney University Stellar Interferometer (SUSI). T. ten Brummelaar outlined the approach to completion of the CHARA array on Mt. Wilson. T. Pauls spoke about recent developments at the Navy Prototype Optical Interferometer. Finally, H. Zinnecker pointed out that the first results had been obtained with the Very Large Telescope Interferometer.

Next came some short reports on new major catalogues. B. Mason reported a large increase in the size of the Washington Double star Catalog, and announced that a new CD version will shortly be available. W. Hartkopf described the rapid progress of the USNO CCD Astrographic Catalog and a project to re-scan the epoch-1930 plates of the AGK2 using modern equipment. Then D. Pourbaix spoke about the Base de données des étoiles doubles et multiples de Besançon, on behalf of E. Oblak, who was unable to attend. He also described his own work for Commission 30 on the Ninth Catalogue of Spectroscopic Binary Orbits, since it is also relevant to Commission 26.

R. Argyle followed these talks with a discussion of amateur projects in double-star measurement, some of which are very substantial and of high quality.

H. Zinnecker noted that some recently discovered giant planets are in orbit around components of binary stars, which raises the interesting question of the long-term stability of such planets' orbits.

A letter from P. Lampens was read. It expressed concern over the difficulty encountered by some double star observers in gaining access to telescopes to pursue long-term projects, and in getting data published in widely read journals, so that others may use them, even if it is premature to draw astrophysically useful conclusions from them. There was widespread agreement that these concerns affect many people, and the meeting agreed to include formal statements of concern in the published report. For details, please see the preprint on the Commission website.

The meeting was then adjourned.

## ANNOUNCEMENT

A New Cassegrain telescope ( $D= 0.62$  m;  $F = 6.2$  m) has been installed at the Ramón María Aller Observatory. Among its main missions, double and multiple star research will occupy a prominent place.

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Universidade de Santiago de Compostela  
Spain

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The deadline for contributions to Information Circular No. 152 is:

February 15th 2004

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