INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26

(DOUBLE STARS)

INFORMATION CIRCULAR No. 156 (JUNE 2005)

NEW ORBITS

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2005 2006	Author(s)
328 00243+5201	HU 506 2°1265	169^{y}29 0″214	1955.06 64°8	0.163 311°8	30°1 2004.9902	87°4 0″112 90.8 0.109	DOCOBO & ANDRADE
490 00352-0336	HO 212 AB 52.2185	6.89 0.241	2000.98 49.4	0.773 283.8	149.0 2004.923	268.2 0.293 283.2 0.278	MASON & HARTKOPF
701 00516+2237	A 1808 3.2029	112.40 0.121	1975.99 17.8	0.827 231.9	163.1 2004.9903	197.2 0.182 197.9 0.184	DOCOBO & ANDRADE
 01158-6853	HJ 3423 0.4201	857.0 5.960	1763.50 127.1	0.384 284.9	10.3 1999.795	320.4 5.00 320.0 5.00	SCARDIA & PANSECCHI
 01450+2703	COU 750 6.1877	58.18 0.356	2000.40 80.9	0.752 247.4	23.2 2004.9903	24.7 0.255 25.9 0.282	DOCOBO & LING
 02231+7021	MLR 377 2.2324	161.26 0.587	1918.14 104.3	0.115 199.1	154.1 2001.9882	145.9 0.570 145.4 0.560	PAVLOVIC & TODOROVIC
 02288+3215	WOR 2 14.9564	24.07 0.361	1987.35 82.9	0.296 122.5	100.6 2004.9903	100.1 0.399 101.6 0.372	DOCOBO & TAMAZIAN
3608 05017+2640	A 1844 AB 14.2800	25.21 0.259	1950.01 17.0	0.291 3.	202. 2001.5197	304.4 0.238 318.7 0.257	MASON & HARTKOPF
4208 05371+2655	STF 749 0.3649	986.6 1.015	1756.85 153.3	0.411 70.9	164.0 2005.215	322.2 1.15 322.0 1.16	SCARDIA & et al. (*)
4392 05484+2052	STT 118 0.7086	508.02 0.646	1805.61 89.7	0.015 121.1	136.3 1993.7628	319.2 0.074 319.5 0.066	PAVLOVIC & TODOROVIC
10074 16294-2626	GNT 1 0.2957	1217.54 2.928	1273.67 80.8	0.079 0.0	91.0 1997.512	276.5 2.677 276.6 2.669	PAVLOVIC & TODOROVIC

NEW ORBITS (continuation)

ADS α**2000**δ	**Name** **n**	**P** **a**	**T** **i**	**e** ω	Ω(2000) **Last ob.**	**2005** **2006**		**Author(s)**
14648	BU 368 AB	251.06	1958.09	0.554	91.6	279.1	0.103	PAVLOVIC &
21074-0814	1.4339	0.500	88.6	128.6	2001.8677	279.9	0.095	TODOROVIC
15398	HU 972 AB	152.20	1962.25	0.637	10.5	249.2	0.309	MANTE
21511+6650	2.3652	0.304	48.1	93.0	1997.6930	250.3	0.310	
	COU 432 BC	29.53	1986.97	0.586	178.4	5.3	0.181	MANTE
21543+1943	12.1910	0.120	125.0	335.0	1997.7160	2.7	0.178	
15962	BU 701	554.46	2288.31	0.139	118.1	185.8	0.941	CVETKOVIC
22281+1215	0.6493	1.400	124.1	105.4	1999.855	185.0	0.945	& OLEVIC
15992	HU 388	368.59	1934.94	0.761	18.2	60.5	0.495	CVETKOVIC
22302+2228	0.9767	0.431	34.4	256.5	2003.9568	60.8	0.498	& OLEVIC
	WRH 37 AaB	159.66	2006.34	0.551	4.2	211.6	0.102	OLEVIC &
23019+4220	2.2547	0.322	114.7	132.0	2000.6171	204.7	0.115	CVETKOVIC
	BLA 12 Aa	8.3	1982.43	0.550	54.0	121.0	0.040	OLEVIC &
23019+4220	43.3735	0.040	179.9	55.7	1997.518	51.4	0.021	CVETKOVIC

(*) SCARDIA, PRIEUR, PANSECCHI, ARGYLE

RICHARD L. "DICK" WALKER (1938 - 2005)

We have the sad duty to report the death of a member of Commission 26. Richard L. "Dick" Walker died March 30, 2005, after having been in declining health for the last couple years.

Dick was born March 9, 1938 in Hampton, Iowa and earned degrees in astronomy and physics from the University of Iowa. He worked for the U.S. Naval Observatory (both in Washington, DC and Flagstaff, Arizona) for over 30 years, before his retirement in 1999. From the mid 1960s through the late 1970s much of Dick's time was devoted to the measurement of binary stars, observing with the 12" and 26" refractors in Washington and later the 40" and 61" reflectors in Flagstaff. He also made many trips to Lick Observatory to work with the 36" Clark Refractor there. During this time he consulted with Charles Worley (who was observing on the 26") to make sure time was well spent examining doubles which could not be observed in Washington. This period of observing overlapped with the early years of speckle interferometry, and Dick's observations, made with the largest telescope used for micrometry at the time, were very important to ascertain the veracity of this new technique.

He was a studious and very careful observer of doubles and made over 8000 measures, resulting in almost 3000 mean positions. While measuring known systems for orbital analysis, he discovered 22 pairs (mostly additional components to these systems) and ascertained the physicality of these new pairs. He also calculated orbits to four fast-moving pairs, and his highlighting the rapid motion of these systems resulted in them being placed on many programs and led to the more definitive orbits of today.

Dick also ventured into other areas of astronomy, among them discovering the moon of Saturn, Epimetheus, in December 1966, with the USNO Flagstaff 61" astrometric reflector.

Dick is survived by his wife, Patricia, six children, ten grandchildren, and two great-grandchildren, who were no doubt a great inspiration in his many interests, among them, writing children's literature. He will be sorely missed by his many friends and colleagues.

A few photos of Dick may be found on the USNO double star website at
http://ad.usno.navy.mil/wds/history/walker.html.

William Hartkopf & Brian Mason.
U.S. Naval Observatory.

ANNOUNCEMENTS

CHANGES IN THE DOUBLE STAR DATABASE

Changes in the Double Star Database

We have recently made changes in the Washington Double Star Catalog and some of its related catalogs which we wanted to bring to your attention.

(1) The format of the WDS has been altered slightly. The column for number of mean positions can now accommodate values up to 9,999 (the largest number in the catalog currently is STF2272, with 1,642 published means). We have reordered the proper motion columns, added an additional column for notes, and increased the accuracy of the precise coordinate by an order of magnitude in both axes, in order to be consistent with the WMC. Currently greater than 96the WDS have precise coordinates.

(2) We have continued our effort to match and extract double star data from wide-field single epoch astrometric catalogs. To date, measures have been extracted for 40,209 pairs from the 2MASS Catalog and an additional 70,057 from the 144 astrometric catalogs used for the computation of Tycho-2 proper motion. This has helped increase the size of the WDS database to 711,174 mean positions of 100,784 systems. The next big task will be the matching and extraction of UCAC data, following that project's final astrometric reduction and catalog publication, scheduled for 2006.

(3) The Sixth Orbit Catalog now also includes formal errors to the orbital elements when listed in the original publication.

(4) Data request software now provides figures illustrating all WDS data for systems with published orbital elements.

(5) Also scheduled for release in 2006 is the Second USNO Double Star CD. This will include current updates of all our catalogs and several other enhancements (such as new lists of "neglected doubles"). We anticipate no other format changes to the Double Star Catalogs in the foreseeable future.

As always, we appreciate notification of any errors or missing data in our catalogs. Tables (preferably electronic) of newly published data are also most welcome.

Brian D. Mason, William I. Hartkopf & Gary L. Wycoff
U.S. Naval Observatory

JOURNAL OF DOUBLE STAR OBSERVATIONS

R. Kent Clark and Rod Mollise of the The University of South Alabama are editing a new publication called the "Journal of Double Star Observations." According to their web page it is a "quarterly journal of amateur astronomy dedicated to the observation and study of double and binary stars." The first issue in pdf format and solicitation for articles and comments is available at their web site :

http://www.southalabama.edu/physics/jdso/

Congratulations to Kent and Rod!

Brian D. Mason
U.S. Naval Observatory

ENGLISH VERSION OF LIADA CIRCULAR ♯2

The Amateur Double Star Section of LIADA (American-Spanish League of Astronomy) has edited their Circular ♯2 (in english) where there have been published 367 relative astrometry measures for 67 visual double stars (using CCD images, Digitized Sky Survey and Two Micron All Sky Survey images) most of them are very neglected or unconfirmed pairs that many have not been resolved for more than 180 years. These measures in addition to BVIJHK optical-to-infrared photometry (from Tycho-2 and 2MASS), kinematical data and historical relative astrometry (from WDS) allow us to obtain spectral types and luminosity classes, photometric parallaxes, relative motions and other astrophysical data to classify visual double stars as physical (11Spectral types were estimated using professional color-spectral type relations and several reduced proper motion diagrams. Preliminary study results in a mean difference of only 0.5 subclasses of spectral type with respect to professional results.

Those interested in the circular please contact Francisco Rica at frica0@terra.es.

NEW BINARY CANDIDATE DISCOVERY BY LIADA'S DOUBLE STAR SECTION: WDS 01116+2823 = FMR 5

LIADA's Double Star Section reports a new binary candidate, catalogued as GSC1753-1506, composed of 12.0 and 13.5 magnitudes stars with an angular separation of 4.62 arcsec. at direction 294.4 degrees. Analyzing 2MASS JHK photometry and Tycho-2 data the binary is composed of G9V and K5V stars located at 172 pc. The similar spectrophotometric parallaxes of the components, obtained by us, in addition to the results of several professional criterions give us strong evidence that point to a physical association of both components. Nevertheless it is necessary to have more relative astrometric data to confirm the physical nature. The expected semi mayor axis is 1,194 A.U. and the approximate orbital period could be 35,000 years.

Francisco Manuel Rica Romero (Coordinator)
LIADA Double Star Section
FRICA0@terra.es

****

The deadline for contributions to Information Circular No. 157 is:

October 15th 2005

J. A. Docobo (oadoco@usc.es)
J. F. Ling (oafana@usc.es)
Tel. +34 981592747
Fax: +34 981597054

Observatorio Astronómico R. M. Aller
P. O. Box 197
http://www.usc.es/astro
Universidade de Santiago de Compostela
SPAIN

ISSN: 1024-7769