INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26

(DOUBLE STARS)

INFORMATION CIRCULAR No. 147 (JUNE 2002)

NEW ORBITS

ADS **α2000δ**	**Name** **n**	**P** **a**	**T** **i**	**e** **ω**	**Ω(2000)** **Last ob.**	**2002** **2003**	**Author(s)**
197 00153+4412	A 1256 AB 2°6095	137^{y}96 0″153	1997.78 62°9	0.724 118°1	68°4 1991.9	254°7 0″060 259.6 0.064	OLEVIC
440 00321+6715	GJ 22 AC 22.1675	16.24 0.535	2000.39 46.6	0.178 91.3	179.0 2001.841	330.2 0.414 350.9 0.493	DOCOBO et al. (*)
 00427-6537	I 440 1.3246	271.78 0.457	1948.45 122.4	0.645 352.9	63.8 1991.73	272.3 0.431 271.8 0.439	LING
650 00470+2315	HU 413 1.0246	351.7 0.623	2074.21 52.5	0.424 25.9	44.9 1994.9	304.7 0.405 306.0 0.402	OLEVIC
705 00520+3154	A 924 2.1727	165.70 0.274	1987.03 153.9	0.639 335.0	55.2 1996.7	331.6 0.183 328.4 0.190	OLEVIC
 01036+6341	MLR 87 6.3241	56.93 0.237	2011.83 131.4	0.515 130.5	62.1 1996.0	56.7 0.239 53.0 0.223	OLEVIC
993 01131+2942	A 1260 2.8714	125.38 0.357	2013.12 82.9	0.736 88.5	59.8 1995.9	54.9 0.227 55.5 0.222	OLEVIC
1016 01158+0947	A 2102 1.9307	186.46 0.592	1934.61 97.6	0.398 255.6	147.8 1994.97	138.4 0.495 138.0 0.487	OLEVIC
1087 01200-1549	HJ 2036 0.2494	1443.34 3.431	2674.91 114.1	0.092 288.9	124.8 1999.8	341.1 2.253 340.8 2.261	OLEVIC
2051 02423+4925	HU 539 1.7549	205.14 0.238	2010.42 134.4	0.631 124.8	29.3 1995.9	343.3 0.094 336.6 0.096	OLEVIC
2177 02512+0141	A 2338 2.2209	162.10 0.471	1975.49 73.0	0.610 114.0	127.0 1996.0	338.4 0.247 340.3 0.243	OLEVIC

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	2002 2003	Author(s)
	CAR 1	10.18	1998.10	0.441	10.4	91.7 0.112	ZIRM &
03496+6318	35.3634	0.102	37.9	281.7	2000.7676	111.5 0.117	HORCH
	DF Tau	92.80	1981.34	0.509	16.2	270.4 0.114	DOCOBO &
04271+2542	3.8793	0.137	135.1	326.4	1998.775	267.2 0.118	TAMAZIAN
	GG TAU Aa	196.60	2060.00	0.317	96.2	347.4 0.245	DOCOBO
04325+1732	1.8311	0.258	142.9	241.4	2001.110	345.9 0.244	et al. (**)
	FIN 343	136.19	2001.03	0.069	177.8	326.7 0.148	OLEVIC
06253+0130	2.6434	0.187	129.5	220.6	1993.1	324.0 0.144	
5687	FIN 334 Aa	213.27	1974.87	0.250	125.3	337.1 0.094	MANTE
07003-2207	1.6880	0.153	118.0	56.0	1993.0897	335.1 0.098	
6552	A 2050	114.84	1986.22	0.753	89.4	270.2 0.157	ZIRM
08047+4717	3.1348	0.152	22.7	40.3	1996.8638	271.9 0.163	
7307	STF 1338 AB	303.27	2023.25	0.254	137.3	290.4 1.02	SCARDIA
09210+3811	1.1871	1.336	29.9	191.9	1999.99	292.1 1.02	et al. (***) I
7307	STF 1338 AB	444.27	1983.69	0.247	177.4	289.4 1.06	SCARDIA
09210+3811	0.8103	1.624	33.4	83.6	1999.99	290.9 1.07	et al. (***) II
	RST 5524	54.50	1984.34	0.509	18.0	154.5 0.159	ZIRM
11441-0448	6.6055	0.146	48.3	330.5	1997.1317	157.6 0.165	
	COU 1291	51.03	2011.66	0.331	121.2	3297.7 0.170	DOCOBO
17075+3810	7.0547	0.174	62.6	278.9	1998.779	301.0 0.164	& LING
12961	A 1658	88.10	1991.60	0.087	51.5	133.4 0.207	DOCOBO
19487+1504	4.0863	0.224	169.8	228.2	2000.5	128.7 0.208	& LING
13894	A 610	170.62	1984.25	0.232	72.0	57.3 0.393	COSTADO
20290+0710	2.1100	0.472	30.3	285.2	2000.519	59.8 0.398	
	J 1	528.39	2396.22	0.745	38.8	53.4 2.055	POPOVIC
20329+1142	0.6813	1.545	58.5	228.4	1991.2	53.5 2.059	& OLEVIC
14749	MCA 67 Aa	81.30	2034.547	0.347	75.8	137.8 0.040	MANTE
21118+5959	4.4280	0.071	112.7	82.7	1997.798	132.8 0.041	

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17030	A 424	173.05	1934.26	0.489	59.3	144.0 0.15	SCARDIA
23498+2741	2.0803	0.255	65.2	283.5	1998.663	146.0 0.15	et al. (***)

(*) DOCOBO, TAMAZIAN, WOITAS and LEINERT
(**) DOCOBO, TAMAZIAN and WOITAS
(***) SCARDIA, PRIEUR, KOECHLIN and ARISTIDI

ANNOUNCEMENT

Changes to the WDS :

- The WDS currently consists of 585,254 mean positions of 98,084 systems.

- Duplicate Discovery Designations Removed:

  One of the more difficult issues in dealing with the WDS as a database is the presence of duplicate discovery designations; that is, different systems assigned the same 3-character and 4-digit designation. These generally fall into one of two categories: systems given the same numbers but published in different lists, and those given some additional designation appended to the original one.

  Examples of the first are the binaries first resolved by W. Herschel and both F.G.W. Struve and O. Struve. William Herschel published seven lists (I - VI, plus "new", or N), with stars of each list starting at number 1. In addition to their original discovery lists, each of the Struve's published an appendix, as well as a list of "rejected" doubles. These multiple lists were completely spelled out in the Aitken Double Star Catalogue (e.g., H IV 48), but when the Index (IDS) Catalogue was compiled at Lick all of these other designators were dropped for lack of space. To uniquely identify a system then required both the discovery designation and the position. As a result there are, for example, five components with the designation H 48! The source Herschel list was given in the notes file to the IDS. Appended and rejected stars from the lists of the Struve's were handled with an "a" or "r" towards the end of the WDS data line in most cases.

  In the second (and fortunately rare) case, systems found quite near to known ones were given the same designation plus trailing character(s) (e.g., ES 1293a or BU 885 1/2). Sometimes both components were assigned these additional characters, sometimes only one; occasionally two pairs in an entirely different section of the sky were given the same designation by the author (probably by mistake).

Each of these cases is being handled in a different manner. For the William Herschel discoveries, a list identifier is added to column three of each designation. For example:

H 19 (at 16 hours) was originally H II 19 and is now known as H 2 19,
H 7 (at 18 hours) was originally H V 7 and is now known as H 5 7, and
H 111 (at 06 hours) was originally H N 111 and is now known as H N 111.

In the case of the O. Struve appendix an A is added following STT in the name. For F. Struve, he provided two appendices. Those from the shorter list (Appendix II) are designated STFB. For example:

STF 11 (appendix I) is now STFA 11.
STF 11 (appendix II) is now STFB 11.
STT 252 (appendix) is now STTA252.

Stars of the second type are given the same 3-letter discovery designation but a new number, starting with 9001, to indicate that they originally had a different designation. For example:

BAL2356b is now BAL9001.
BU 885 1/2 is now BU 9001.

A complete list of stars of the second type is provided in the error correction file. All changes in designation are described in the notes file. In addition to these, designations for 271 W. Herschel (H), 110 F. Struve (STF) and 227 O. Struve (STT) systems have been changed. Note that for some of these systems, the former three character, four digit reference (a3i4) has been replaced by a four character, three digit reference (a4i3). Although, for all USNO applications (e.g., data or observing list request) an a7 read will see no difference.

- Arcsecond Precise Coordinates:

  Coordinates which are sixty times more precise than the WDS identifier are now provided for the majority of WDS systems (i.e., tenths of a second of time and seconds of arc). Coordinates are obtained from Hipparcos, Tycho-2, the Tycho Double Star Catalogue, or through manual inspection. It is expected that the next significant improvement in this area will be when either the 2MASS or UCAC data are cross-referenced with the WDS. Incremental changes will continue to be made as well. The ten-digit WDS identifier is retained and will continue to be the same for all components in hierarchical systems. However, the precise coordinate will be for the primary of the subsystem. For example, in the case of a system made up of A-BC and BC pairs, they will both have the same ten-digit WDS identifier, however, the fourteen digit precise coordinate would be of the A and B component, respectively.

  So far this matching has been made for 80% of the WDS (i.e., 78,655 systems). These coordinates are found close to the end of the WDS summary line.

- Secondary Proper Motions added:

  The most common note (N = 1421) in the WDS notes file was the proper motion of the secondary, when known. The above matching with Tycho-2 has allowed the determination of secondary proper motion for 37% of the WDS (i.e., 36,042 systems). The secondary proper motion is found following the precise position. This is expected to grow considerably when the UCAC is complete.

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The deadline for contributions to Information Circular No. 148 is:

October 15th 2002

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