

INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26

(DOUBLE STARS)

INFORMATION CIRCULAR No. 134 (FEBRUARY 1998)

NEW ORBITS

ADS α 2000 δ	Name n	P a	T i	e ω	Ω (2000) Last ob.	1998 1999	Author
6549 08041+3302	STT 187 1 ^o 53	235 ^o 0 0 ^o 349	1937.0 132 ^o 9	0.71 86 ^o 0	219 ^o 0 1994.1523	346 ^o 9 0 ^o 38 346.3 0.38	MASON & HARTKOPF
7341 09245+1808	A 2477 0.60	600.0 0.726	1914.5 49.6	0.546 341.0	248.3 1995.28	347.6 0.43 348.5 0.44	MASON & HARTKOPF
– 11053-2718	FIN 47 47.74	7.54 0.142	1983.2 98.0	0.36 328.0	224.0 1996.1783	236.4 0.05 218.0 0.09	MASON & HARTKOPF
8446 12108+3953	STF 1606 0.484	744.0 1.267	1993.24 136.4	0.693 275.1	125.2 1997.39	185.5 0.31 181.3 0.31	MASON & HARTKOPF
8862 13198+4747	HU 644 7.360	48.91 1.507	1968.55 94.45	0.229 73.55	91.09 1997.41	121.1 0.28 110.1 0.42	MASON & HARTKOPF
8987 13395+1046	BU 612 16.02	22.46 0.200	1929.84 42.6	0.56 357.0	37.0 1997.1263	73.3 0.09 119.6 0.10	MASON & HARTKOPF
– 14260+4213	COU 1757 5.8824	61.2 0.247	1998.7 58.2	0.49 280.3	10.1 1992.408	273.6 0.07 309.0 0.07	MANTE
9617 15232+3017	STF 1937 8.6557	41.591 0.871	1933.884 57.6	0.2759 38.5	203.3 1997.2684	53.5 0.87 58.3 0.81	MASON & HARTKOPF
– 16216+3631	COU 982 2.0	180.0 0.398	1990.1 31.6	0.438 316.8	78.8 1993.501	78.2 0.24 82.2 0.25	MANTE

NEW ORBITS (continuation)

ADS α2000δ	Name n	P a	T i	e ω	Ω(2000) Last ob.	1998 1999	Author
– 19180+2012	COU 321 5.0690	71.02 0.165	1997.27 102.8	0.408 209.9	138.1 1995.7620	307.7 0.08 302.1 0.06	DOCOBO & LING
16800 23304+3050	BU 1266 7.44	48.4 0.189	1910.0 142.0	0.43 335.0	249.0 1996.8628	36.7 0.17 30.0 0.16	MASON & HARTKOPF
16886 23382+5514	A 1493 3.0252	119.0 0.155	2014.7 158.0	0.170 141.3	44.3 1995.9153	331.8 0.13 328.0 0.13	DOCOBO & LING

CHARLES EDMUND WORLEY, 1935-1997

Charles Worley, 62, Astronomer at the U.S. Naval Observatory, died unexpectedly on Dec. 31, 1997, after a short illness. He was born on May 22, 1935, in Iowa City, Iowa, and grew up in Des Moines where his father was a doctor. He became interested in astronomy at age nine. His first observational work as an amateur astronomer was plotting and recording of more than 10,000 meteors for the American Meteor Society. Continuing his love for astronomy he attended Swarthmore College where he took part in the parallax program. He also met the other love of his life, his wife, Jane. He obtained a B.A. in mathematics from San Jose State College in 1959. He worked for the Lick Observatory in California (1959-1961) as a research astronomer under a Naval Research grant to observe double stars. Since arriving at the U.S. Naval Observatory in 1961, he was the motive force behind an extensive program of double star observation (being, himself, a prolific observer having the second largest number of double star measurements ever achieved by one person), instrumental innovation, and double star cataloging. He quickly gained recognition as one of the world's leading experts in the field of double star astronomy.

In 1965 Charles arranged for the database of double star data, the Index Catalogue of Visual Double Stars (IDS), to be transferred from the Lick Observatory to the USNO. This database has become a truly comprehensive resource under his guidance, and is formally recognized as the international source of double star data by the International Astronomical Union (IAU). He updated the database on a continuing basis adding 290,400 observational records to the original 179,000 and increasing the original 64,000 systems by an additional 17,100 through careful literature searches and extensive communication with other double star observers throughout the world. During the past three years he extended the scope and utility of the database, now known as the Washington Double

Star Catalog (WDS) by adding accurate photometric data, improved spectral types, and identification information. The project was completed in 1996, and the revised WDS is available on the world wide web. Most recently he oversaw the addition of 15,000 Hipparcos Catalog double stars into the WDS. Requests for information from the WDS database arrive daily from astronomers all over the world.

In collaboration with William Finsen and later Wulff Heintz, Charles produced two Catalogs of Orbits of Visual Binary Stars, the most recent published in 1983. At the time of his death he was preparing what would have been a new version.

In recent years an accurate knowledge of double and multiple star separations, position angles, and orbital motions has become increasingly important to astronomy. It is now realized that not only must double stars be identified and calibrated in order to produce the best astrometric catalogs of stellar positions, but also the varying centers of emission at different wavelength bands must be taken into account to meet modern high-precision astrometric needs. For Charles's contribution to this aspect of astrometry, he received the 1994 U.S. Naval Observatory Simon Newcomb Award for Scientific Research Achievement.

In 1991 he was elected as vice-president of Commission 26 of the IAU (Multiple & Double Stars) and became president of that commission at the IAU General Assembly in 1994. He was a member of IAU Commission 5, the American Astronomical Society, including the AAS Historical Astronomy Division, and the Royal Astronomical Society. He was also an active supporter of the amateur community, and published a series of articles in *Sky and Telescope* and produced the double star section of the "Observer's Handbook".

During his career Charles made over 40,000 measures of double and multiple stars using the USNO filar micrometer on telescopes in the northern and southern hemispheres. In 1990 he obtained a speckle interferometer in order to improve the accuracy of double star measurements. During the past seven years he oversaw improvements in both instrumentation and software implementation that resulted in making the USNO the world's second largest producer of double star observations using a speckle interferometer. Under Charles's direction more than 9,200 observations were made with the speckle interferometer on 1,100 systems down to separations of one-fifth of an arcsecond, the theoretical limit of the 26-inch refractor. Recently the speckle interferometer has been used to observe Hipparcos problem stars on the McDonald 2.1-m Otto Struve telescope. His special interest in nearby stars led to the discovery of 39 new, cool stellar companions. These companions which are faint and difficult to observe provide critical census information on the solar neighborhood. From 1954 to 1997 he published some 75 professional papers primarily on double star astronomy and gave numerous invited presentations at meetings. He was known for exacting standards and high quality best typified by his paper challenging all other double star observers; "Is This Orbit Really Necessary?"

We are reminded of a favorite quote of Charles' from Paul Couteau's book "Observing Visual Double Stars": "Do not forget that an astronomer who observes perfect images visually is a wild beast who devours his prey. Do not disturb him under any pretext. Let nature take its course".

Charles will be sorely missed by his many friends and colleagues.

Geoffrey G. DOUGLASS
Thomas E. CORBIN
Brian D. MASON
U. S. Naval Observatory

ANNOUNCEMENT

We are at present considering changes to the format of the Washington Double Star Catalog. Some suggestions thus far have been minor (e.g., increasing the number of digits in the 2000 coordinate for greater accuracy). However, it is possible that other changes are needed. We encourage all users of the WDS to look at its current structure < <http://aries.usno.navy.mil/ad/wds> > and to please make suggestions either on the web Comment form < http://aries.usno.navy.mil/ad/wds/wds_comment.html >, via email or postal mail (addresses below).

As the official double star database of the IAU ICRS working group, we are endeavoring to make certain that all double star measurements are included in the database. A complete list of all references included thus far is available at < http://aries.usno.navy.mil/ad/wds/wds_ref.dat >. If possible, please check to see that all of your references are included. If you find any omissions, they can be enumerated on the web Comment form, via email or postal mail.

In this task, we are also asking double star observers in the future to send via email the tabular data in ASCII format of double star measures after or at the time of publication.

Brian Mason
bdm@draco.usno.navy.mil
Astrometry Dept.,
US Naval Observatory
3450 Massachusetts Ave., NW
Washington, DC 20392-5420
USA

PAPERS PUBLISHED IN 1997

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The deadline for contributions to Information Circular No. 135 is:

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J. A. Docobo (oadoco@usc.es)
 J. F. Ling (oafana@usc.es)
 Fax: (81) 59 70 54

Observatorio Astronómico "R. M. Aller"
 P. O. Box 197
 Universidade de Santiago de Compostela
 SPAIN