

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS

Number 2926

Konkoly Observatory
Budapest
22 August 1986
HU ISSN 0374 - 0676

IDENTIFICATIONS AND ASTROMETRIC
POSITIONS OF CATAclySMIC BINARIES
AND RELATED OBJECTS

The catalogue by Ritter (ref. 1) contains many variables with semi-precise positions and inadequate finder charts in the published literature. The following positions for some of these stars were measured on a Coradograph measuring machine at the RGO using glass copies of the PSS. An average of 19 AGK3 stars within a 2 degree square centred on the variable were used in the reductions, but in the cases of MT Ser, V794 Aq1 and VW Pyx, SAO positions were used. Photographic finder charts are included for five of these stars.

Full details and an extensive bibliography for all but two of these stars are given in ref. 1.

STAR DESIGNATIONS

Five of the stars in ref. 1 plus HuruHata's star in ref. 4 have been designated in the 67th name list (ref. 24) and are given their new designations in the table. The list below gives the designations used in ref. 1.

V363 Aur	=	Lanning 10
SW Sex	=	PG1012-029
DO Dra	=	PG1140+719
V795 Her	=	PG1711+336
MT Ser	=	Abell 41

NOTES ON INDIVIDUAL STARS

EG Cnc

The discovery of this star was reported by Masaaki HuruHata in ref. 4. Only one maximum to m_v 11.9 in Nov. 1977 is known. A photo showing the star in outburst was kindly supplied by HuruHata, allowing an unambiguous identification of the star on the PSS. The approximate magnitudes on the PSS prints are 18.6 (red) and 18.0 (blue). The magnitudes given by

STAR	TYPE ¹	R.A. (1950.0)			RMS	DEC. (1950.0)			RMS	EPOCH	IDENT ²
		h	m	s		°	'	"			
TY Psc	DN,SU	01	22	50.38	±.3	+32	07	34.9	±.2	49.97	(2)*
V363 Aur	NL,UX	05	30	09.77	.3	+36	57	29.4	.3	54.90	(3)
EG Cnc	(DN?)	08	40	03.26	.4	+28	02	39.2	.3	53.94	(4)*
AC Cnc	NL	08	41	41.70	.3	+13	03	26.1	.3	51.91	(5)*
BZ UMa	(DN)	08	49	52.36	.4	+58	00	03.9	.3	54.91	(6)
VW Pyx	PN,DS	08	55	38.57	.5	-28	45	58.0	.5	56.19	(7)
SW Sex	NL,UX	10	12	37.22	.7	-02	53	35.1	.5	52.09	(8)
DO Dra	NL,XS	11	40	48.88	.4	+71	57	58.5	.4	53.28	(9)*
UX CVn	DS,DE	12	12	17.71	.4	+36	55	29.7	.3	56.35	(10)
Case 1	DS	12	13	16.30	.2	+52	47	47.8	.4	55.29	(11)
LX Ser	NL,UX	15	35	45.00	.3	+19	01	48.6	.3	50.29	(12)
V795 Her	NL	17	11	05.73	.3	+33	34	48.5	.3	54.51	(8)
MT Ser	PN,DS	17	26	10.26	.5	-15	10	43.1	.5	54.58	(13)
V380 Oph	NL	17	47	46.91	.2	+06	06	17.5	.2	53.61	(14)*
V477 Lyr	PN,DS	18	29	18.43	.2	+26	53	59.2	.2	51.53	(15)
UU Sge	PN,DS	19	39	54.99	.5	+16	58	07.5	.5	50.54	(16)
RZ Sge	DN,SU	20	01	02.31	.2	+16	54	23.3	.3	51.72	(17)
V794 Aql	NL,UX,AD	20	14	56.57	.3	-03	49	11.9	.2	51.51	(17)
CM Del	DN,UG	20	22	39.93	.4	+17	08	07.0	.4	51.52	(17)
V751 Cyg	NL,UX,AD	20	50	26.65	.3	+44	08	04.5	.3	54.51	(18)
V425 Cas	-	23	01	34.91	.4	+53	01	04.5	.5	53.83	(19)

1 - Type as given in Ritter (ref. 1). See below. Brackets indicate stars not in his catalogue, i.e. stars with no established orbital period.

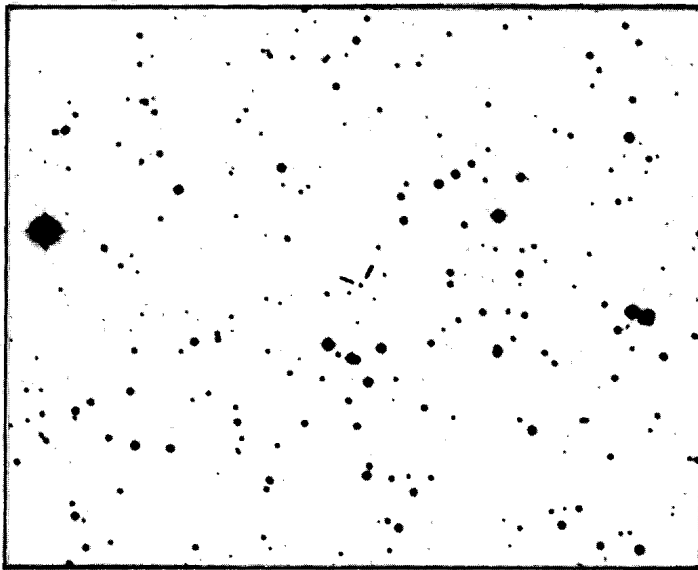
2 - References to the published charts used to identify the variable.

An asterisk indicates a photographic finder chart in this paper.

TYPE AD - Anti-dwarf nova = VY Sc1 object, subtype of NL
DE - Doubly evolved system i.e. both components are highly evolved
DN - Dwarf nova
DS - Detached system
NL - Nova-like variable
PN - Central star of a planetary nebula
SU - SU UMa star, subtype of DN
UG - Dwarf nova of either U Gem or SS Cyg subtype
UX - UX UMa star, subtype of NL
XS - X-ray source

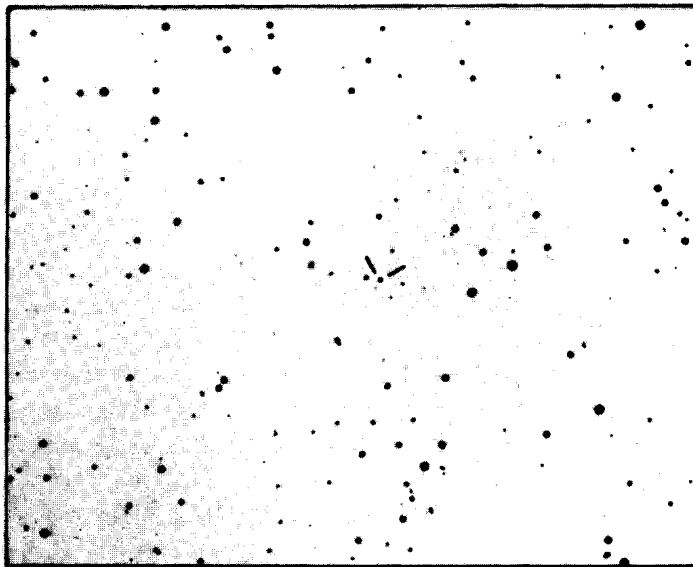
3

NORTH



TY Psc (PSS E)

WEST 10'



EG Cnc (PSS O)

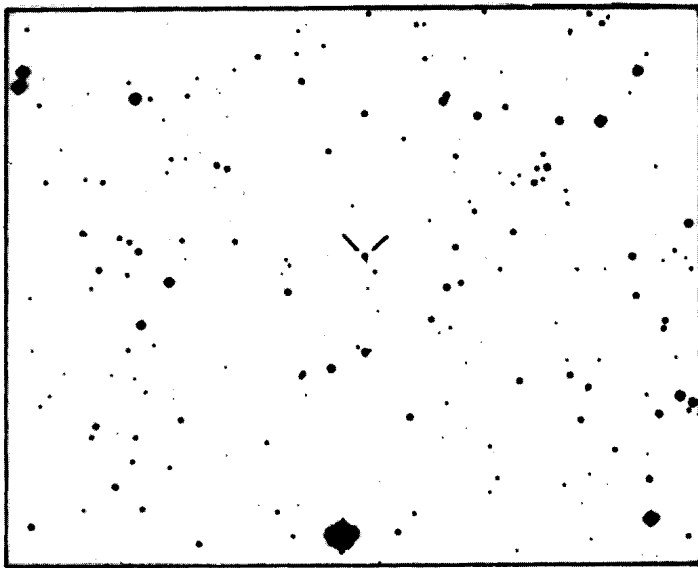
SOUTH

(Copyright 1960 National Geographical Society - Palomar Sky Survey.
Reproduced by permission of the California Institute of Technology)

Fig. 1

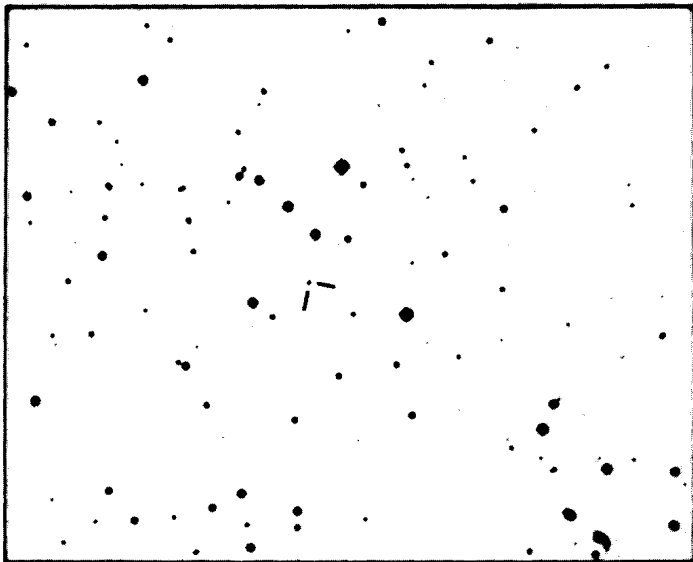
4

NORTH



AC Cnc (PSS E)

WEST 10'

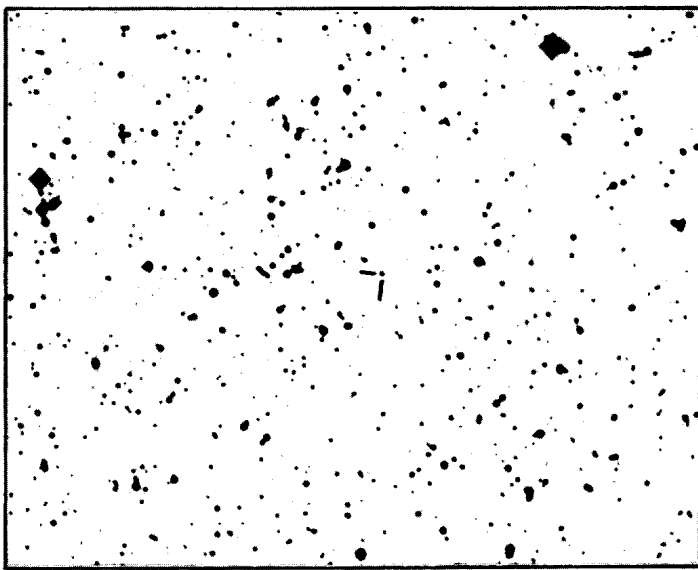


DO Dra (PSS O) SOUTH

(Copyright 1960 National Geographical Society - Palomar Sky Survey.
Reproduced by permission of the California Institute of Technology)

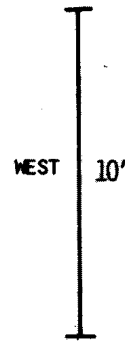
Fig. 2

NORTH



V380 OPH (PSS E)

SOUTH



(Copyright 1960 National Geographical Society - Palomar Sky Survey.
Reproduced by permission of the California Institute of Technology)

Fig. 3

Huruhata in ref. 4 seem to refer to a star 26"E and 3"N of the variable. From the rate of decline of 2 magnitudes in 20 days, a range of over 6 mags., and the blue colour on the PSS, a similarity to WZ Sge, UZ Boo and WX Cet is suggested (see ref. 20). A photographic chart is published here.

V363 Aur = Lanning 10

It is noted that the declination of this star is some 0.5 arcminute south of the position given in refs. 1 and 3, and that the R.A. in ref. 1 is grossly different. However as ref. 3 provides an identification chart and the measurement was checked against a second plate, it is believed that the positions in refs. 1 and 3 are in error.

DO Dra = PG1140+719 = 3A1148+719 = 2A1150+719 \neq YY Dra

The initial confusion between this star and the "lost" variable YY Dra (discovered by Tsevevich on Pulkova plates of Z Dra) has been cleared by Wenzel (refs. 9,21). Examination of plates at the epoch of Tsevevich's discovery may reveal the identity of YY Dra. A photographic chart of DO Dra is published here.

Case 1

Ref. 11 notes a total proper motion of 0.11 arcseconds/year.
Outbursts of up to 0.7 mag. in B are reported in ref. 23.

CHARTS

All charts are from the Palomar Sky Survey. The scale and orientation are the same for all charts and is indicated. Charts copied from the blue prints are labelled (PSS O) and those from the red (PSS E). (Figs. 1 - 3).

I acknowledge the valuable help of Bob Argyle and Dave King and thank the RGO for access to the facilities.

ROBERT H. McNAUGHT
c/o U.K. Earth Satellite Research Unit,
Siding Spring Observatory,
Coonabarabran,
N.S.W. 2357, Australia

References:

- 1 - Ritter, H. 1984, "Catalogue of cataclysmic binaries, low-mass X-ray binaries and related objects (third edition)", Astr. and Ap. Suppl. Ser., 57, 385
- 2 - AAVSO chart supplied by Janet Mattei, AAVSO, 25 Birch Street, Cambridge, Mass., 02138, U.S.A.
- 3 - Lanning, H.H. 1973, P.A.S.P. 85, 70
- 4 - Huruhata, M. 1983, I.B.V.S. 2401
- 5 - Kurochkin, N.E. and Shugarov, S.Yu. 1980, Astron. Tsirk. No. 1114
- 6 - Markarian, B.E. 1968, Astrofizika, 4, 144
- 7 - Acker, A., Gleizes, F., Chopinet, M., Marcout, J., Ochsenbein, F., and Roques, J.M. 1983, Complement 2 to the "Catalogue of Central Stars of True and Possible Planetary Nebulae", Obs. de Starsbourg, Publ. Speciale du C.D.S. No. 3
- 8 - Green, R.F., Ferguson, D.H., Leibert, J., and Schmidt, M. 1982, P.A.S.P., 94, 560
- 9 - Wenzel, W. 1983, M.V.S., 9, 141
- 10 - Gaposchkin, S. 1962, A.J., 67, 360
- 11 - Stephenson, C.B. 1971, in "White Dwarfs", Luyten, W.J., Ed., I.A.U. Symp. No. 42, 61
- 12 - Stepanian, J.A. 1979, I.B.V.S. 1630
- 13 - Grauer, A.D. and Bond, H.E. 1983, Ap.J., 271, 259
- 14 - Hoffmeister, C. 1929, Sonneberger M tt. No. 16
- 15 - Kurochkin, N.E. 1980, Astron. Tsirk. No. 1143
- 16 - Bond, H.E., Liller, W., and Mannery, E.J. 1978, Ap.J., 223, 252
- 17 - Vogt, N. and Bateson, F.M. 1982 Astr. and Ap. Suppl. Ser., 48, 383
- 18 - Herlig, G.H. 1958, Ap.J., 128, 259 (star no. 170)
- 19 - Hoffmeister, C. 1967, A.N., 289, 205 (star S9712 Cas)
- 20 - Bailey, J. 1979, M.N.R.A.S., 189 Short communication, 41p
- 21 - Wenzel, W. 1983, I.B.V.S. 2262
- 22 - Williams, G. 1983, Ap.J.Supp1.Ser. 53, 523 (referred to as YY Dra)
- 23 - Shugarov, S.Yu. 1984, I.B.V.S. 2612
- 24 - Kholopov, P.N., Samus, N.N., Kazarovets, E.V., and Perova, N.B. 1985, I.B.V.S. 2681