

DTIC FILE COPY

C

AD-A223 003

PUBLICATIONS
OF
THE UNITED STATES
NAVAL OBSERVATORY

Second Series

Vol. XXV—Part III

Micrometer Measures of 2589 Double Stars

DTIC
SELECTE
JUN 18 1990
S D



WASHINGTON: 1989

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

90 00 1 00

PUBLICATIONS
OF THE
UNITED STATES
NAVAL OBSERVATORY

SECOND SERIES

VOLUME XXV
Part III



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1989

PART III

MICROMETER MEASURES OF 2589 DOUBLE STARS

By

CHARLES E. WORLEY

AVAILABLE FOR \$24.00 FROM US NAVAL
OBSERVATORY, 34th & Massachusetts Ave., NW
Washington, DC 20392
TELECON 6/18/90 VG

Accession For	
NTIS - SPAN	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By <i>24.00 per call</i>	
Distribution	
Availability Codes	
Dist	Availability or Special
<i>A-1 21</i>	



MICROMETER MEASURES OF 2589 DOUBLE STARS

INTRODUCTION

This publication lists 10,004 micrometer measures of 2589 double stars. Of these measures, 7425 were made with the 26-Inch (66-cm) refractor in Washington, D.C. and 2579 with the 36 and 60-Inch (91 and 155cm) reflectors at Cerro Tololo, Chile. Many pairs were measured in more than one season or with more than one telescope; thus, the total number of means tabulated in Table 2 is 3280.

OBSERVING PROGRAM

While the measures contained in this paper represent a continuation of the series presented earlier (Worley 1967, 1971, 1972a, 1972b, 1978), there has been a modification in the nature of some of the pairs observed, so that the present series contains a slight increase in the number of wider pairs measured. There are two reasons for this. First, in the last decade substantial numbers of the closer pairs have been observed by speckle interferometry, thus decreasing the need for measurement by the less accurate micrometer. Second, the completion of the **Washington Double Star Catalog, 1984.0** (Worley and Douglass 1984), revealed that numerous wide pairs had not received attention for many decades. In particular, there are numerous John Herschel pairs which have not been reobserved since their discovery in 1820–30. Modern observations not only serve to confirm the existence of these pairs, but also provide more precise measures than the rather crude estimates by Herschel. Another group of stars, the pairs detected by Kuiper among the nearby and bright stars in the 1930's, has also received attention. Otherwise, the program continues to emphasize close pairs in orbital motion, and also includes a substantial number of double stars recently discovered.

Observations at Cerro Tololo Inter-American Observatory began in 1970, and have been continued at intervals since. The measures included in Table 1 were all made with the 36 and 60-Inch reflectors in 1978, 1980, 1983, and 1984.

Table 1 gives the distribution of the pairs in measured separation, using the same group intervals chosen for previous lists. As remarked before, the fact that more than 60% of the measured separations are less than one second of arc continues to pay tribute to the quality of seeing at both Cerro Tololo and Washington.

Table 1

DISTRIBUTION OF PAIRS IN MEASURED SEPARATION

Measured Separations	Number	Percent	Cumulative Percent
<0".10	4	0.1	
0.10-0.19	247	7.5	7.6
0.20-0.29	505	15.4	23.0
0.30-0.39	355	10.8	33.8
0.40-0.49	256	7.8	41.6
0.50-0.59	208	6.3	47.9
0.60-0.79	281	8.6	56.5
0.80-0.99	232	7.1	63.6
1.00-1.39	383	11.7	75.3
1.40-1.99	380	11.6	86.9
>2.00	429	13.1	100.0

INSTRUMENTATION

There have been few changes in the 26-Inch telescope/micrometer combination since last described in 1978, except that a new printer was installed at the beginning of 1987. A number of incomplete observations are included in Table 2, owing to occasional defective operation of the printer or counters. Also, there have been problems with the R.A. clutch, and a persistent intermittent failure of the dome rotation due to stretching of the cable. The adopted screw value of the micrometer, R , is 11.04 arc seconds.

The former Lainton-Hussey micrometer has been on permanent loan to Cerro Tololo for some time. In 1975-76 the writer made some minor changes to this instrument. New Plossl-type eyepieces were secured, and the micrometer wires replaced with ones made of etched tungsten. The wire illumination was also improved. Adopted screw values, R , for the 36 and 60-Inch reflectors were 10.28 and 6.27 arc seconds, respectively.

ACKNOWLEDGEMENTS

Maintenance of the 26-Inch telescope and micrometer has been the responsibility of W.L. Dunn, Jr., and J.L. Hershey. I am especially indebted to G.G. Douglass for production of the large table.

Observations in Chile were obtained while I was a Visiting Astronomer at Cerro Tololo Inter-American Observatory, which is supported by the National Science Foundation. I wish to thank successive directors V.M. Blanco and P.S. Osmer, as well as their staff, for their courtesy and able help, which ensured the success of these observations.

REFERENCES

- Worley, C.E.
1967 Pub. U.S. Naval Obs. **XVIII**, Pt. VI.
1971 Ibid., **XXII**, Pt. II.
1972a Ibid., **XXII**, Pt. IV.
1972b Astron. J. **77**, 878.
1978 Pub. U.S. Naval Obs. **XXIV**, Pt. VI.
Worley, C.E. and Douglass, G.G.
1984 The Washington Double Star Catalog, 1984.0. (WDS).
Available on tape.

DESCRIPTION OF TABLE 2.

Table 2 contains 10,004 measures of 2589 double stars. Each pair is represented first by a heading, followed successively by the individual measures, the mean positions, and residuals and notes. The closing date for means included in this table is 1988.0.

The Heading

Left side. The ADS number is given first. In the absence of an ADS number, the space is left blank. There then follows the discoverer's designation and number, using the abbreviations listed in the WDS.

Right side. The right ascension and declination for 2000, according to the current values listed in the WDS.

The Individual Measures

Column 1: The decimal date of the observation.

Column 2: The measured position angle.

Column 3: The measured separation.

Column 4: Position of the eyes:

1 = eyes perpendicular to the line joining the stars;

2 = eyes parallel;

3 = a combination of positions 1 and 2;

4 = star images placed between, and perpendicular to, both wires.

Column 5: The seeing on a scale of 10, with seeing 1 being very poor, and 10 perfect. In practice, observations were rarely made in seeing 3 or worse.

Column 6: The hour angle in tenths of an hour.

Column 7: The nominal magnifying power used.

26-Inch refractor:

- 1 = 20mm Plössl, 500X.
- 2 = 16mm Plössl, 620X.
- 3 = 12mm Plössl, 820X.
- 4 = 10mm Plössl, 990X.
- 5 = 8mm Plössl, 1230X.

36-Inch reflector:

- 1 = 25mm Plössl, 500X,
- 2 = 20mm Plössl, 615X,
- 3 = 16mm Plössl, 770X,
- 4 = 12mm Plössl, 1025X,

60-Inch reflector:

- 850X.
- 1060X.
- 1330X.
- 1770X.

Column 8: The estimated magnitude difference.

Column 9: The telescope used.

The Means

Column 1: The mean date.

Column 2: The mean position angle.

Column 3: The mean separation.

Column 4: The number of rights of observation.

Column 5: The mean magnitude difference.

Column 6: The telescope used.

TABLE 3
INDIVIDUAL MEASURES AND MEANS

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

17156	WEI 45	00 00.2 +01 46	4	A 428	00 02.6 -08 30		
81.897	86.1	2.03	2 6 -0.3 3 0.4 26	84.773	17.2 0.30 2 5 0.0 3 0.3 60		
81.960	87.0	1.91	2 5 -0.1 3 0.4 26	84.782	9.9 0.28 2 6 -0.4 3 0.4 60		
84.946	84.9	1.90	2 6 -0.1 3 0.5 26	84.784	14.0 0.29 1 5 +0.2 3 0.2 60		
82.934	86.0	1.95	3n 0.4 26-Inch	84.790	20.1 0.24 2 8 +0.2 3 0.3 60		
	I 1477	00 00.3 -44 18		84.782	15.3 0.28 4n 0.3 60-Inch		
78.770	312.3	0.51	2 5 +0.1 1 0.5 36	Heintz, 1969: +0.1, -0.03.			
78.773	312.4	0.43	2 5 +0.3 1 0.3 36	Zulevic, 1984: +1.5, +0.01.			
78.781	307.9	0.41	2 5 +0.3 1 0.6 36				
78.775	310.9	0.45	3n 0.5 36-Inch	17	A 1500	00 03.3 +53 32	
17178	HLD 60	00 01.4 +39 38		86.830	243.1 0.30	2 7 -0.1 3 0.3 26	
77.760	185.1	1.04	2 5 -0.1 3 0.6 26	86.884	239.7 0.28	2 7 0.0 3 26	
77.946	184.4	1.20	2 6 0.0 3 0.2 26	86.994	239.4 0.30	2 6 -0.1 3 26	
77.995	187.2	1.12	2 5 +0.1 3 0.3 26	86.903	240.7 0.29	3n 0.3 26-Inch	
81.787	183.1	1.30	2 7 -0.3 4 0.4 26		WOR 30	00 03.7 +53 28	
81.826	183.9	1.21	2 6 -0.1 4 0.4 26	86.830	183.8 0.92	2 6 0.0 3 1.0 26	
81.842	184.2	1.00	2 6 -1.0 4 0.3 26	86.884	182.5 0.86	2 7 -0.1 3 0.7 26	
81.864	185.0	1.07	2 4 -0.4 3 0.4 26	86.994	183.5 0.89	2 6 -0.2 3 1.2 26	
77.900	185.6	1.12	3n 0.4 26-Inch	86.903	183.3 0.89	3n 1.0 26-Inch	
81.830	184.0	1.14	4n 0.4 26-Inch		I 700	00 03.9 -57 50	
Heintz, 1963: +2.1, +0.10; +2.4, +0.08.				84.795	288.2 0.42	2 5 0.0 4 0.2 36	
17167	HO 208	00 01.5 +30 44		84.798	291.2 0.42	2 8 -0.1 4 0.1 36	
79.718	199.3	1.16	2 4 -0.1 3 2.0 26	84.801	290.0 0.42	2 6 0.0 4 0.0 36	
79.797	201.7	1.06	1 7 0.0 4 2.0 26	84.798	289.8 0.42	3n 0.1 36-Inch	
79.885	201.2	1.12	2 7 -0.2 4 1.6 26		32	STF 3056	00 04.6 +34 16
79.890	202.8	1.14	2 5 -0.3 3 1.6 26	79.885	147.5 0.77	2 7 -0.1 4 0.2 26	
79.822	201.2	1.12	4n 1.8 26-Inch	79.890	144.6 0.75	2 5 -0.2 3 0.3 26	
17176	FOX 52	00 02.2 +57 16		79.956	147.6 0.81	2 6 -0.3 3 0.0 26	
86.808	139.6	2.63	2 5 0.0 3 0.3 26	79.910	146.6 0.78	3n 0.2 26-Inch	
86.824	137.0	2.43	2 6 0.0 3 0.3 26		34	BU 862	00 04.7 +38 10
86.830	134.2	2.33	2 7 -0.1 3 0.2 26	81.787	10.1 0.47	2 7 -0.2 4 0.3 26	
86.821	136.9	2.46	3n 0.3 26-Inch	81.826	10.7 0.57	2 6 -0.1 4 0.3 26	
17180	A 1249	00 02.4 +10 46		81.842	9.3 0.52	2 6 -1.0 4 0.5 26	
81.897	244.1	0.27	2 5 -0.3 3 0.6 26	81.818	10.0 0.52	3n 0.4 26-Inch	
81.897	244.1	0.27	1n 0.6 26-Inch	Couteau, 1986: +2.0, -0.01.			
3	A 1499	00 02.6 +55 34		44	J 629	00 05.0 +21 25	
86.824	205.4	1.48	2 6 0.0 3 1.0 26	81.787	303.5 1.68	2 7 -0.1 4 1.4 26	
86.830	205.6	1.49	2 7 -0.1 3 1.2 26	81.826	303.0 1.51	2 7 -0.1 4 1.0 26	
86.884	206.6	1.51	2 7 -0.2 3 0.6 26	81.867	303.5 1.44	2 5 -0.1 3 1.0 26	
86.994	207.7	1.48	2 7 -0.3 3 0.8 26	81.827	303.3 1.54	3n 1.1 26-Inch	
86.883	206.3	1.49	4n 0.9 26-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

9

54	J 865	00 05.5 +27 36	78.932	284.6	1.43	4n	0.9	26-Inch
			81.830	291.0	1.38	4n	1.0	26-Inch
			85.468	298.2	1.42	4n	0.8	26-Inch
			Baize, 1957: -0.2, 0.00; -0.2, -0.05; -0.7, -0.02.					
	77.760	78.5 1.63 2 5 -0.1 3 0.8 26						
	77.946	78.9 1.48 2 6 +0.1 3 1.4 26						
	77.995	81.2 1.53 2 5 +0.1 3 0.8 26						
	77.900	79.5 1.55 3n 1.0 26-Inch						
55	A 110	00 05.8 +42 39	74	HU 1	00 06.7 -12 10			
	79.890	125.4 2.17 2 5 -0.2 3 0.2 26		84.787	111.2 1.05 2 5 +0.1 3 0.8 60			
	79.956	125.8 2.17 2 6 -0.2 3 0.1 26		84.790	106.0 1.02 2 7 +0.2 3 1.3 60			
	80.890	124.6 2.14 2 6 +0.1 3 0.1 26		84.793	107.6 0.96 2 7 -0.1 3 1.2 60			
	80.245	125.3 2.16 3n 0.1 26-Inch		84.790	108.3 1.01 3n 1.1 60-Inch			
57	BU 863	00 05.9 +73 35	73	BU 1155	00 06.8 +04 27			
	79.885	123.6 1.93 2 7 0.0 4 0.7 26		81.787	84.0 0.50 2 6 0.0 4 1.0 26			
	79.890	125.6 1.95 2 5 -0.2 3 0.5 26		81.826	86.8 0.67 2 5 0.0 4 1.0 26			
	79.915	125.9 2.08 2 6 -0.3 3 0.8 26		81.864	85.4 0.54 2 4 -0.2 3 0.5 26			
	79.897	125.0 1.99 3n 0.7 26-Inch		81.826	85.4 0.57 3n 0.8 26-Inch			
	RST 5180	00 05.9 -30 20	80	KU 3	00 07.4 +20 29			
	78.792	318.0 0.26 2 6 0.0 1 0.3 60		79.718	77.2 0.98 2 5 -0.1 3 0.1 26			
	78.803	322.9 0.20 2 5 +0.2 1 0.6 60		79.797	79.2 0.89 2 8 -0.1 4 0.1 26			
	78.806	318.3 0.28 2 6 +0.3 1 0.5 60		79.885	76.6 0.98 2 7 0.0 4 0.0 26			
	78.800	319.7 0.25 3n 0.5 60-Inch		79.800	77.7 0.95 3n 0.1 26-Inch			
Fifty degrees direct motion.								
62	J 143	00 06.0 +13 15		HDO 181	00 09.0 -54 00			
	77.746	88.4 2.46 2 6 0.0 4 0.1 26		78.781	317.9 0.19 2 6 +0.3 1 0.8 36			
	77.760	87.4 2.61 2 5 0.0 3 0.6 26		78.784	313.5 0.25 1 6 +0.1 1 0.7 36			
	77.946	87.4 2.66 2 6 +0.2 3 0.3 26		78.787	326.7 0.21 2 7 +0.4 1 0.6 36			
	77.995	91.2 2.66 2 5 +0.2 3 0.6 26		78.789	320.7 0.23 1 7 +0.2 1 1.2 36			
	77.862	88.6 2.58 3n 0.4 26-Inch		78.785	319.7 0.22 4n 0.8 36-Inch			
63	HU 401	00 06.1 +23 46	102	STF 2	00 09.3 +79 43			
	78.836	217.7 0.77 2 5 0.0 3 0.4 26		79.885	26.5 0.52 1 7 0.0 4 0.4 26			
	78.932	218.1 0.76 2 6 0.0 3 0.3 26		79.890	27.4 0.60 1 5 -0.1 3 0.2 26			
	78.948	223.8 0.72 3 4 -0.4 3 26		79.945	26.0 0.61 2 5 +0.1 3 0.3 26			
	78.905	219.9 0.75 3n 0.4 26-Inch		84.946	19.1 0.59 1 7 -0.2 3 0.3 26			
				84.962	22.8 0.62 1 5 -0.3 3 0.2 26			
				85.967	22.5 0.70 1 5 -0.2 3 0.2 26			
				85.997	21.9 0.60 1 5 -0.3 3 0.2 26			
61	STF 3062	00 06.2 +58 26		79.907	26.5 0.58 3n 0.3 26-Inch			
	78.836	282.2 1.41 2 6 -0.1 3 0.8 26		85.468	21.6 0.63 4n 0.2 26-Inch			
	78.932	284.6 1.36 2 7 -0.2 3 0.8 26		Scardia, 1980: +2.0, -0.04; -0.7, -0.03.				
	78.948	286.2 1.48 2 5 -0.5 3 1.0 26						
	79.011	286.0 1.46 2 5 +0.1 3 1.0 26						
	81.787	289.7 1.36 2 6 -0.2 4 0.9 26						
	81.826	290.9 1.37 2 6 -0.1 4 1.0 26						
	81.842	292.9 1.36 2 7 -1.0 4 1.0 26						
	81.864	290.7 1.45 2 4 -0.3 3 1.0 26						
	84.946	296.3 1.38 2 7 -0.2 3 0.8 26						
	84.962	297.9 1.28 2 6 -0.3 3 1.0 26						
	85.967	297.8 1.55 2 5 -0.3 3 0.8 26						
	85.997	300.6 1.46 2 5 -0.3 3 0.8 26						
			112	ES 745	00 09.5 +50 17			
				84.962	181.3 2.83 2 5 -0.2 3 0.6 26			
				85.967	182.4 2.93 2 5 -0.1 3 1.0 26			
				85.997	184.0 2.67 2 5 -0.2 3 0.7 26			
				85.642	182.6 2.81 3n 0.8 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

	HU 1328			00 10.1 -49 09			148	BU 1026			00 12.1 +53 37		
	84.795	265.5	0.93	2 4	0.0 4	0.2 36	79.885	17.2	0.15	2 7	0.0 4	0.8 26	
	84.798	267.3	0.91	2 8	-0.1 4	0.2 36	79.956	8.5	0.14	2 6	-0.2 3	26	
	84.801	269.8	0.83	2 7	0.0 4	0.2 36	80.928	17.0	0.18	2 5	0.0 4	26	
	84.798	267.5	0.89	3n	0.2	36-Inch	80.256	14.2	0.16	3n	0.8	26-Inch	
124	BU 253			00 10.4 +58 31			Eggen, 1965(1): +2.1, -0.02. Baize, 1984: -3.8, 0.00. Starikova, 1985: -8.9, +0.02. McAlister et. al. have detected a third star in the system.						
	86.830	33.1	0.46	2 6	0.0 3	0.4 26	RST 3343						
	86.884	32.7	0.55	2 7	-0.1 3	0.3 26	78.792	213.8	0.21	1 6	0.0 1	0.2 60	
	86.994	33.8	0.50	2 6	-0.1 3	0.5 26	78.803	214.6	0.18	2 5	+0.2 1	0.0 60	
	86.903	33.2	0.50	3n	0.4	26-Inch	78.806	213.6	0.20	2 7	+0.3 1	0.2 60	
	I 43			00 10.6 -73 14			78.800	214.0	0.20	3n	0.1	60-Inch	
	84.798	235.4	0.20	2 8	0.0 4	0.6 36	Direct motion of 80 degrees since discovery.						
	84.801	238.7	0.18	2 5	+0.1 4	0.8 36							
	84.800	237.0	0.16	2n	0.7	36-Inch							
Closed in. Retrograde motion of 90 degrees. No observations 1931-1977.													
	RST 4140			00 11.2 -08 53			156	BU 864			00 13.1 +35 20		
	84.773	309.2	1.04	2 5	0.0 3	0.2 60	79.718	142.5	2.46	2 5	-0.1 3	3.4 26	
	84.782	313.9	0.89	2 6	-0.4 3	60	79.956	141.8	2.28	2 7	-0.2 3	3.5 26	
	84.784	312.2	1.00	2 4	+0.1 3	0.1 60	79.837	142.2	2.37	2n	3.4	26-Inch	
	84.780	311.8	0.98	3n	0.0	60-Inch	161	STT 2			00 13.4 +26 59		
Angular increase.													
	RST 2			00 11.3 -47 02			81.897	201.8	0.28	2 6	-0.3 3	1.4 26	
	84.798	91.6	0.44	2 8	+0.1 4	0.2 36	81.897	201.8	0.28	1n	1.4	26-Inch	
	84.801	86.8	0.44	2 5	0.0 4	0.2 36	Heintz, 1979: +7.2, +0.04.						
	84.800	89.2	0.44	2n	0.2	36-Inch	163	A 1254			00 13.6 +44 11		
Retrograde motion with increasing separation.													
							76.955	271.8	1.42	2 5	-0.1 3	0.5 26	
							77.746	274.6	1.36	2 7	0.0 4	0.6 26	
							77.760	274.1	1.41	2 6	-0.1 3	0.4 26	
							77.487	273.5	1.41	3n	0.5	26-Inch	
142	HO 1			00 11.5 +29 36			176	A 902			00 14.3 +60 20		
	79.718	164.2	1.31	2 5	-0.2 3	0.2 26	81.787	321.6	0.78	2 7	0.0 4	2.6 26	
	79.797	163.4	1.25	2 7	0.0 4	0.2 26	81.787	321.6	0.78	1n	2.6	26-Inch	
	79.846	161.9	1.28	2 6	+0.2 4	0.2 26	Other attempts to see the companion have failed.						
	79.787	163.2	1.28	3n	0.2	26-Inch							
143	STF 7			00 11.7 +55 57			B 636						
	86.808	208.6	1.38	1 6	0.0 3	0.4 26	00 16.0 -61 48						
	86.824	211.7	1.30	2 6	0.0 3	0.4 26	78.770	104.8	2.45	2 5	+0.1 1	0.7 36	
	86.830	209.9	1.34	2 6	0.0 3	0.5 26	78.773	106.3	2.33	2 5	+0.1 1	0.2 36	
	86.884	211.4	1.34	2 7	0.0 3	0.6 26	78.784	105.8	2.19	2 7	+0.1 1	0.2 36	
	86.836	210.4	1.34	4n	0.5	26-Inch	78.776	105.6	2.32	3n	0.4	36-Inch	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

11

207	STF 13	00 16.3 +76 57	240	A 1804	00 17.4 +10 02
79.885	59.5	0.88	2 8	0.0	4 0.2 26
79.890	60.6	0.82	2 5	0.0	3 0.2 26
79.923	61.4	0.94	2 4	-0.3	4 0.5 26
79.899	60.5	0.88	3n	0.3	26-Inch
Heintz, 1960: +3.4, +0.02.					
219	HU 405	00 16.6 +24 33	251	BU 393	00 18.3 -21 09
78.948	290.5	1.32	2 5	-0.4	3 0.2 26
79.718	289.3	1.27	2 5	-0.1	3 0.1 26
79.797	289.5	1.30	2 7	0.0	4 0.1 26
79.488	289.8	1.32	3n	0.1	26-Inch
220	STF 19	00 16.7 +36 37	274	J 630	00 20.2 +21 29
84.946	136.1	2.33	2 7	0.0	3 2.0 26
84.962	137.9	2.16	2 5	-0.2	3 2.4 26
85.967	136.8	2.32	2 5	0.0	3 1.4 26
85.292	136.9	2.27	3n	1.9	26-Inch
221	STT 4	00 16.7 +36 29	281	BU 1015	00 20.7 +12 18
81.867	174.6	0.49	2 5	-0.1	3 0.7 26
81.897	177.2	0.45	2 6	-0.3	3 0.8 26
84.962	168.4	0.41	2 5	-0.2	3 0.8 26
82.909	173.4	0.45	3n	0.8	26-Inch
Muller, 1957: +5.1, -0.09. Scardia, 1982: +0.1, -0.08. Starikova, 1983: -0.4, -0.08.					
227	HU 3	00 17.0 -10 20	279	HJ 1019	00 20.8 +60 03
84.784	108.0	1.60	2 5	+0.1	4 0.5 26
84.787	108.8	1.49	2 6	-0.1	3 0.4 26
84.790	107.9	1.53	2 7	+0.2	3 0.1 60
84.787	107.6	1.54	3n	0.1	60-Inch
231	J 869	00 17.2 +33 17	283	HJ 1018	00 20.9 +67 40
77.760	248.2	1.57	2 6	0.0	3 0.0 26
77.995	252.2	1.63	2 5	+0.2	3 0.0 26
78.836	248.6	1.68	2 5	-0.1	3 0.2 26
78.197	249.7	1.63	3n	0.1	26-Inch
231	ES 2274	00 17.4 +33 03	291	HU 1202	00 21.2 +35 39
77.946	172.1	2.00	1 5	+0.1	3 0.8 26
81.842	177.7	1.84	2 6	+0.2	4 1.6 26
81.897	174.9	1.87	2 6	-0.3	3 1.4 26
80.562	174.9	1.90	3n	1.3	26-Inch
81.897	29.7	1.31	2 6	-0.3	3 1.0 26
84.946	28.4	1.13	2 7	0.0	3 0.5 26
84.962	29.6	1.10	1 5	-0.1	3 1.0 26
83.935	29.2	1.18	3n	0.8	26-Inch
78.792	25.6	0.57	2 6	0.0	1 0.7 60
78.803	24.2	0.69	1 4	+0.2	1 0.8 60
78.808	25.0	0.63	2 5	0.0	1 0.6 60
78.801	24.9	0.63	3n	0.7	60-Inch
78.836	114.8	2.75	2 5	0.0	3 1.0 26
78.932	114.9	2.73	2 7	-0.1	3 0.4 26
78.948	116.4	2.79	2 5	-0.4	3 0.6 26
78.905	115.4	2.76	3n	0.7	26-Inch
78.836	59.6	0.20	2 5	0.0	3 26
78.932	59.9	0.24	2 6	-0.1	3 0.0 26
78.948	64.6	0.22	2 5	-0.4	3 0.2 26
81.867	75.5	0.25	2 5	-0.1	3 0.0 26
81.897	72.6	0.26	2 5	-0.2	3 26
78.905	61.4	0.22	3n	0.1	26-Inch
81.882	74.0	0.26	2n	0.0	26-Inch
Baize, 1973: +0.3, -0.06; +5.3, -0.05.					
Nearly a quadrant described since my last measure in 1967.					
79.885	225.2	0.25	2 7	+0.1	4 0.5 26
79.956	229.1	0.27	2 6	-0.2	3 0.4 26
79.920	227.2	0.26	2n	0.4	26-Inch
79.885	89.1	1.59	2 8	0.0	4 0.5 26
79.890	89.7	1.55	2 5	-0.1	3 0.4 26
79.923	90.7	1.65	2 4	-0.3	4 0.6 26
79.899	89.8	1.60	3n	0.5	26-Inch
Muller, 1956: +3.5, +0.16.					
76.955	200.8	1.06	2 4	-0.2	3 0.5 26
77.746	201.3	1.10	2 6	0.0	4 0.5 26
77.760	201.3	1.16	2 5	0.0	3 0.4 26
77.487	201.1	1.11	3n	0.5	26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

293	STT 6	00 21.3 +67 00	329	HO 491	00 24.4 +36 29
79.885	159.0	0.47 2 7 +0.1 4 0.6 26	76.955	208.8	1.19 2 4 -0.2 3 0.3 26
79.956	161.0	0.47 2 7 -0.1 3 0.8 26	77.746	208.3	1.18 2 6 0.0 4 0.6 26
80.659	156.1	0.48 2 7 -0.1 4 1.0 26	77.760	209.5	1.21 2 5 0.0 3 0.4 26
80.167	158.7	0.47 3n 0.8 26-Inch	77.487	208.9	1.19 3n 0.4 26-Inch
Muller, 1953: +7.3, -0.15. The orbit fails.			Quadrant reversed.		
296	STT 7	00 21.7 +66 28	349	J 632	00 25.9 +04 07
79.885	126.7	0.88 2 7 +0.2 4 0.7 26	78.932	81.5	1.83 2 7 0.0 3 0.0 26
79.956	125.8	0.76 2 7 -0.1 3 0.7 26	78.948	81.8	2.03 2 5 -0.4 3 0.0 26
80.659	124.8	0.91 2 7 0.0 4 0.8 26	79.797	79.6	1.86 2 7 -0.1 4 0.0 26
80.167	125.8	0.85 3n 0.7 26-Inch	79.226	81.0	1.91 3n 0.0 26-Inch
302	RST 5493 BC	00 21.8 -23 01	350	STT 9	00 26.3 +56 47
78.806	92.3	0.12 2 7 +0.3 1 0.2 60	81.867	56.3	2.02 2 5 0.0 3 2.4 26
78.808	88.0	0.14 2 5 +0.4 1 0.0 60	81.897	54.0	1.93 2 7 -0.1 3 3.0 26
78.807	90.2	0.13 2n 0.1 60-Inch	82.825	55.2	1.90 2 6 -0.4 3 2.2 26
			82.196	55.2	1.95 3n 2.5 26-Inch
304	A 907	00 22.6 +54 17	355	BU 1156	00 26.7 +64 26
81.867	216.3	0.79 2 5 0.0 3 0.3 26	79.956	32.3	0.52 2 5 -0.1 3 0.3 26
81.897	215.6	0.79 2 6 -0.1 3 0.2 26	80.890	36.6	0.69 2 5 0.0 3 0.7 26
84.946	213.1	0.71 2 6 +0.1 3 0.2 26	81.787	28.3	0.52 2 7 -0.2 4 0.4 26
82.903	215.0	0.76 3n 0.2 26-Inch	81.826	34.1	0.59 2 6 -0.1 4 0.6 26
	RST 1186	00 22.9 -28 52	82.825	37.7	0.50 2 6 -0.1 4 0.6 26
78.806	220.4	0.26 2 6 +0.4 1 0.0 60	81.456	33.8	0.56 5n 0.5 26-Inch
78.808	228.1	0.26 2 5 +0.5 1 0.0 60	357	MLB 277	00 27.0 +64 30
78.807	224.2	0.26 2n 0.0 60-Inch	82.825	74.2	6.93 2 6 -0.3 3 0.2 26
	RST 2243	00 23.3 -54 10	86.824	72.7	6.60 2 7 -0.2 3 0.3 26
78.770	142.2	0.84 2 4 +0.1 1 0.5 36	86.830	73.8	6.66 2 7 -0.2 3 0.8 26
78.781	145.6	0.77 2 4 +0.2 1 0.4 36	85.493	73.6	6.73 3n 0.4 26-Inch
78.784	145.3	0.98 2 7 +0.1 1 0.6 36	363	A 431	00 27.1 -07 53
78.778	144.4	0.86 3n 0.5 36-Inch	74.912	67.0	0.29 2 6 -0.2 3 0.0 26
325	A 1805	00 24.0 +09 55	78.789	58.3	0.33 2 7 +0.3 1 0.0 36
84.962	314.9	4.23 4 5 0.0 3 2.8 26	78.792	59.5	0.28 2 6 0.0 1 0.1 60
86.808	320.3	5.05 2 5 -0.1 3 3.5 26	78.796	57.4	0.29 2 5 +0.3 1 0.0 60
87.000	316.5	4.65 2 5 -0.1 3 3.2 26	74.912	67.0	0.29 1n 0.0 26-Inch
86.257	317.2	4.64 3n 3.2 26-Inch	78.789	58.3	0.33 1n 0.0 36-Inch
	VOU 83	00 24.2 -13 05	78.796	58.4	0.28 2n 0.0 60-Inch
84.773	61.0	0.56 2 6 -0.1 3 0.0 60	Zulevic, 1971: -1.1, +0.03; -0.1, +0.02; 0.0, -0.03.		
84.784	64.2	0.38 2 4 +0.1 3 60	I 44	00 29.2 -54 38	
84.787	57.4	0.42 2 6 0.0 3 0.2 60	84.798	260.0	0.49 2 7 -0.1 4 0.6 36
84.781	60.9	0.45 3n 0.1 60-Inch	84.801	256.0	0.45 2 6 0.0 4 0.4 36
This is the only measure since discovery. Angular increase.			84.800	258.0	0.47 2n 0.5 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

13

	S 1709			00 28.3 -20 20			434	STT 12			00 31.7 +54 31		
78.792	269.2	0.13	2 7	+0.1	1 0.0	60	77.746	185.5	0.51	2 7	0.0	4 0.0	26
78.803	262.7	0.16	2 4	+0.1	1 0.0	60	77.760	183.4	0.52	2 6	+0.1	3 0.0	26
78.806	266.2	0.13	2 7	+0.4	1 0.0	60	77.946	184.3	0.60	2 6	-0.1	3 0.2	26
							77.995	186.0	0.58	2 5	0.0	3 0.2	26
78.800	266.0	0.14	3n	0.0	60-Inch		81.867	185.6	0.57	2 5	0.0	3 0.3	26
van den Bos, 1956 (1): -13.2, -0.01.							81.882	186.1	0.46	2 6	-0.1	3 0.4	26
(2): -13.0, -0.02.							84.962	187.9	0.57	2 4	-0.1	3	26
							85.997	188.3	0.46	2 5	-0.4	3 0.4	26
							86.027	187.2	0.49	2 4	-0.2	3	26
							86.830	185.2	0.50	2 6	-0.1	3	26
							86.884	188.2	0.54	2 7	-0.2	3 0.0	26
							86.994	187.0	0.55	2 7	-0.2	3 0.4	26
							77.862	184.8	0.55	4n	0.1	26-Inch	
							81.882	185.8	0.52	2n	0.4	26-Inch	
							85.662	187.8	0.51	3n	0.4	26-Inch	
							86.903	186.8	0.53	3n	0.2	26-Inch	
							Heintz, 1963: +2.8, -0.03; +2.2, -0.05; +2.8, -0.06; +1.3, -0.04.						
385	HU 601			00 28.7 +21 34			450	A 111			00 32.1 -05 11		
78.932	307.0	0.42	2 7	0.0	3 0.5	26	78.789	273.1	0.18	2 7	0.0	1 0.0	36
78.948	313.5	0.41	2 5	-0.4	3 0.5	26	78.792	276.5	0.15	2 6	+0.1	1 0.0	60
79.797	307.8	0.54	2 7	-0.1	4 0.5	26	78.800	271.2	0.18	2 5	+0.3	1 0.0	60
							78.806	272.6	0.14	2 6	+0.4	1 0.2	60
79.226	309.4	0.46	3n	0.5	26-Inch		84.773	171.0	0.16	2 6	-0.1	3	60
							84.782	174.2	0.13	2 7	-0.7	3 0.0	60
							84.787	168.4	0.14	2 6	+0.1	3 0.0	60
							84.790	167.6	0.12	2 6	+0.1	3 0.0	60
							78.789	273.1	0.18	1n	0.0	36-Inch	
							78.800	273.4	0.16	3n	0.1	60-Inch	
							84.783	170.3	0.14	4n	0.0	60-Inch	
							Zulevic, 1971: +4.1, -0.01; +4.6, -0.03; +11.0, -0.02.						
416	BU 394			00 30.8 +47 32									
86.824	310.2	0.19	2 7	-0.1	3	26							
86.830	298.3	0.13	2 7	-0.1	3	26							
86.884	304.0	0.15	2 8	-0.1	3	26							
86.994	298.9	0.10	2 6	-0.2	3	26							
86.883	302.8	0.14	4n		26-Inch								
Closed in and too close for good measures with the 26-inch.													
417	ES 1129			00 30.9 +49 17									
76.788	263.7	1.10	2 5	-0.1	3 0.4	26							
76.966	265.3	1.23	2 7	0.0	4 0.3	26							
77.746	266.2	1.10	2 6	0.0	4 0.2	26							
77.167	265.1	1.14	3n	0.3	26-Inch								
426	BU 1158 BC			00 31.0 -10 05			453	HU 510			00 33.0 +51 51		
78.789	39.1	0.24	2 7	+0.1	1 0.0	36	76.955	132.3	1.69	2 5	-0.2	3 1.2	26
84.787	61.0	0.20	2 5	0.0	3 0.0	60	78.932	133.2	1.72	2 7	-0.5	3 1.0	26
84.790	62.2	0.18	2 6	0.0	3 0.2	60	79.011	135.0	1.58	2 4	0.0	3 0.6	26
84.793	63.0	0.19	2 6	-0.3	3 0.0	60							
							78.299	133.5	1.66	3n	0.9	26-Inch	
78.789	39.1	0.24	1n	0.0	36-Inch								
84.790	62.1	0.19	3n	0.1	60-Inch								
Direct motion now fairly rapid.													
							461	A 911			00 33.4 +47 39		
							78.932	316.3	0.57	2 7	-0.5	3 0.4	26
							79.011	316.4	0.50	2 4	-0.2	3 0.7	26
							79.797	316.0	0.68	2 7	0.0	4 0.4	26
							79.247	316.2	0.58	3n	0.5	26-Inch	
							475	D 2			00 34.5 -04 33		
							78.792	261.1	0.47	2 5	+0.2	1 0.8	60
							78.800	261.4	0.49	2 5	+0.4	1 0.4	60
							78.796	261.2	0.48	2n	0.6	60-Inch	
Eggen, 1965 (1): +4.3, -0.01.													

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

479	A 433	00 34.9 -08 53	543	JOH 1	00 38.7 -27 10
84.784	31.4 4.13	2 4 0.0 3 2.4 60	84.787	93.5 0.09	2 7 +0.1 3 60
84.790	30.5 4.11	2 7 +0.1 3 3.0 60	84.790	93.4 0.09	2 7 +0.2 60
84.793	31.5 4.17	2 6 -0.3 3 2.0 60	84.788	93.4 0.09	2n 60-Inch
84.789	31.1 4.14	3n 2.5 60-Inch	540	MLB 109	00 39.1 +58 43
493	STT 15	00 35.8 +49 01	86.824	61.9 1.75	2 6 -0.1 3 0.2 26
77.746	316.6 0.18	1 7 +0.1 4 1.2 26	86.830	66.9 1.77	2 6 -0.1 3 0.2 26
77.946	308.0 0.22	1 6 0.0 3 1.5 26	86.884	61.1 1.52	2 7 -0.2 3 0.3 26
77.995	305.9 0.23	3 5 0.0 3 1.0 26	86.846	63.3 1.68	3n 0.2 26-Inch
77.896	310.2 0.21	3n 1.2 26-Inch	545	HU 513	00 39.2 +51 28
501	A 913	00 36.4 +56 21	75.884	204.7 1.10	1 5 0.0 3 0.8 26
81.787	89.3 0.71	2 7 -0.2 4 0.6 26	77.760	206.3 1.02	2 5 +0.1 3 1.2 26
81.826	91.4 0.71	2 6 -0.1 4 0.6 26	77.946	204.6	2 6 0.0 3 0.6 26
81.842	91.4 0.62	2 6 -0.1 4 0.4 26	77.995	206.9 1.23	2 6 0.0 3 0.5 26
81.818	90.7 0.68	3n 0.5 26-Inch	77.396	205.6 1.12	3n 0.8 26-Inch
506	A 807	00 36.4 +12 13	559	BU 257	00 40.2 +47 15
78.932	243.4 0.95	2 6 0.0 3 1.5 26	86.824	244.8 0.62	2 6 -0.1 3 0.3 26
79.885	240.4 0.95	2 7 +0.1 4 1.8 26	86.830	250.9 0.68	2 6 -0.1 3 0.5 26
79.956	242.6 0.84	2 5 -0.1 3 1.4 26	86.884	244.6 0.63	2 6 -0.2 3 0.5 26
79.591	242.1 0.91	3n 1.6 26-Inch	86.994	250.1 0.60	2 7 -0.2 3 0.6 26
504	A 914	00 36.6 +56 08	86.883	247.6 0.63	4n 0.5 26-Inch
81.787	31.9 0.40	2 7 -0.1 4 0.0 26	570	LEO 3	00 41.0 -07 41
81.826	32.9 0.47	2 5 0.0 4 0.0 26	78.792	9.4 2.19	1 5 +0.2 1 0.5 60
81.842	32.5 0.41	2 6 0.0 4 0.2 26	78.800	8.7 2.19	2 5 +0.3 1 0.4 60
81.818	32.4 0.43	3n 0.1 26-Inch	78.796	9.0 2.19	2n 0.4 60-Inch
518	FOX 54	00 37.2 +08 06	573	KU 6	00 41.3 +14 39
78.932	151.6 1.50	2 6 0.0 3 0.5 26	86.884	227.0 2.00	2 7 -0.1 3 0.3 26
79.885	154.0 1.59	2 7 +0.2 4 0.6 26	86.994	226.5 2.05	2 7 -0.1 3 26
79.956	152.7 1.50	2 6 0.0 3 0.2 26	87.000	226.8 1.95	2 5 -0.2 3 0.2 26
79.591	152.8 1.53	3n 0.4 26-Inch	86.959	226.8 2.00	3n 0.2 26-Inch
520	BU 395	00 37.2 -24 46	581	B 10	00 41.7 -24 45
78.781	308.2 0.39	2 7 +0.7 1 0.2 36	78.781	177.1 0.28	2 7 +0.7 1 36
78.784	308.8 0.36	2 7 +0.9 1 0.2 36	78.784	182.1 0.13	2 7 +0.7 1 36
78.782	308.5 0.38	2n 0.2 36-Inch	78.787	184.3 0.19	2 6 +0.4 1 36
van den Bos, 1937: -0.7, 0.00.			78.789	175.3 0.19	2 8 +0.7 1 0.0 36
515	BU 1097	00 37.3 +58 01	78.785	179.7 0.20	4n 0.0 36-Inch
81.787	258.4 0.51	2 6 0.0 4 0.2 26	586	I 1075	00 42.2 -22 59
81.826	253.6 0.47	2 5 0.0 4 0.5 26	78.792	30.4 0.88	2 7 +0.4 1 0.2 60
81.842	253.7 0.43	2 6 0.0 4 0.4 26	78.800	27.1 0.89	2 5 +0.7 1 0.2 60
81.867	251.4 0.46	2 5 0.0 3 0.3 26	78.808	29.3 0.94	2 5 +0.3 1 0.4 60
81.830	254.3 0.47	4n 0.3 26-Inch	78.800	28.9 0.90	3n 0.3 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

15

588	STT 18	00 42.3 +04 10	673	BJ 495	00 48.8 +18 42
79.011	194.0	1.74 1 4 +0.1 3 1.0 26	78.031	45.0	0.26 2 5 0.0 3 26
79.846	195.8	1.79 1 5 -0.2 4 1.8 26	78.836	44.4	0.17 2 6 +0.1 3 0.0 26
79.956	194.1	1.76 1 6 -0.3 3 1.6 26	78.932	38.8	0.25 2 7 0.0 3 0.0 26
80.057	195.0	1.87 1 4 +0.9 3 1.5 26	79.846	35.7	0.30 2 6 0.0 4 0.0 26
79.718	194.7	1.79 4n 1.5 26-Inch	79.885	35.9	0.21 2 7 +0.1 4 0.3 26
Baize, 1956: -5.4, +0.31. The orbit fails.			79.956	31.0	0.29 2 6 0.0 3 0.0 26
591	A 435	00 42.5 -05 43	81.787	32.1	0.24 2 6 -0.1 4 0.0 26
78.792	239.8	0.41 2 5 +0.3 1 0.6 60	81.826	31.8	0.30 2 6 -0.1 4 0.3 26
78.800	242.4	0.44 2 5 +0.4 1 0.5 60	81.897	34.3	0.30 2 6 0.0 3 0.2 26
78.808	240.2	0.45 2 4 +0.4 1 0.5 60	86.824	18.2	0.30 2 7 -0.2 3 0.0 26
78.800	240.8	0.43 3n 0.5 60-Inch	86.830	24.7	0.31 2 6 -0.1 3 0.0 26
	I 440	00 42.6 -65 36	86.884	22.1	0.28 2 7 -0.1 3 26
78.803	294.5	0.22 2 4 +0.5 1 0.5 60	86.994	25.1	0.27 2 7 -0.1 3 26
78.806	296.6	0.26 2 6 +0.5 1 0.4 60	78.600	42.7	0.23 3n 0.0 26-Inch
78.808	295.4	0.27 2 3 +0.5 1 0.3 60	79.896	34.2	0.27 3n 0.1 26-Inch
78.806	295.5	0.25 3n 0.4 60-Inch	81.837	34.3	0.28 3n 0.2 26-Inch
611	HU 1015	00 44.2 +65 01	86.883	22.5	0.29 4n 0.0 26-Inch
81.842	311.8	0.57 2 6 0.0 4 0.4 26	Starikova, 1983: -1.8, -0.03; -6.6, -0.02; -2.0, -0.04; -5.2, -0.09.		
81.897	313.2	0.66 2 7 -0.1 3 0.6 26	675	J 223	00 48.8 +10 45
81.870	312.5	0.62 2n 0.5 26-Inch	78.932	102.5	1.64 2 7 +0.1 3 0.0 26
632	BU 493	00 45.8 +51 08	79.846	102.3	1.84 2 7 +0.1 4 0.1 26
75.884	53.7	0.83 2 6 -0.1 3 0.2 26	79.885	102.2	1.69 2 7 +0.1 4 0.1 26
76.917	50.6	0.79 2 5 0.0 3 0.1 26	79.554	102.3	1.72 3n 0.1 26-Inch
77.746	52.6	0.75 2 7 0.0 4 0.2 26	676	J 222	00 49.3 +61 01
76.849	52.3	0.79 3n 0.2 26-Inch	77.946	178.6	2 5 -0.1 3 0.3 26
635	A 2002	00 45.8 +06 54	81.842	179.8	2.82 2 6 0.0 4 0.3 26
78.932	125.7	0.19 2 7 0.0 3 0.0 26	81.897	179.2	2.96 2 6 -0.1 3 0.6 26
79.956	136.3	0.23 2 6 0.0 3 0.0 26	81.870	179.5	2.89 2n 0.4 26-Inch
81.015	127.6	0.25 2 8 0.0 3 26		RST 19	00 49.4 -65 00
79.968	129.9	0.22 3n 0.0 26-Inch	84.798	32.0	0.30 2 7 +0.3 4 0.2 36
Considerable retrograde motion.			84.801	29.0	0.27 2 6 -0.1 4 0.2 36
	RST 4155	00 46.1 -22 14	84.800	30.5	0.28 2n 0.2 36-Inch
78.781	29.8	0.21 2 7 +0.7 1 0.0 36	Decrease in angle and separation.		
78.784	28.6	0.19 2 8 +0.5 1 0.0 36		B 2067	00 49.7 -18 40
78.787	33.7	0.21 2 6 +0.4 1 0.0 36	84.793	111.2	6.57 2 5 -0.4 3 60
78.789	23.0	0.21 2 7 +0.7 1 0.2 36	84.793	111.2	6.57 1n 60-Inch
78.785	28.8	0.20 4n 0.0 36-Inch	This is the only measure.		
Heintz, 1984: +0.9, -0.03. An orbit by Costa, Docobo gives worse residuals.			701	A 1808	00 51.6 +22 38
			76.966	112.4	0.10 2 7 +0.1 4 26
			76.966	112.4	0.10 1n 26-Inch
			Rapid motion. Should receive speckle ob- servations.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

709	STF 67		00 52.1 +10 36	755	STF 73		00 54.9 +23 38
86.824	351.2	2.13	1 6 -0.2 3 0.3 26	78.031	249.6	0.59	2 5 -0.1 3 0.3 26
86.830	351.0	2.20	1 6 0.0 3 0.5 26	78.836	253.0	0.57	2 6 0.0 3 0.4 26
86.884	351.7	2.36	1 7 -0.1 3 0.5 26	78.932	254.6	0.59	2 7 +0.1 3 0.6 26
				79.011	253.4	0.54	2 4 -0.3 3 26
86.846	351.3	2.23	3n 0.4 26-Inch	80.659	262.2	0.65	2 7 -0.4 4 0.5 26
				80.890	260.0	0.63	2 6 +0.3 3 0.3 26
				80.928	259.3	0.63	2 6 0.0 4 0.5 26
713	HU 201		00 52.1 -13 13	81.015	260.7	0.75	2 8 0.0 3 0.6 26
78.781	100.8	0.63	2 7 +0.7 1 0.2 36	84.962	273.7	0.63	2 5 -0.3 3 0.5 26
78.784	102.1	0.73	2 8 +0.3 1 0.5 36	85.997	276.5	0.63	2 5 -0.4 3 0.3 26
78.787	101.8	0.74	2 6 -0.1 1 0.6 36	86.027	274.6	0.64	2 3 -0.3 3 0.0 26
84.784	106.6	0.86	2 5 -0.1 3 0.3 60	86.044	275.7	0.57	2 6 +0.3 3 0.3 26
84.787	102.4	0.82	2 8 0.0 3 0.2 60	86.808	278.0	0.73	2 5 -0.4 3 0.2 26
84.790	101.5	0.86	2 7 0.0 3 0.3 60	86.824	278.3	0.72	2 7 -0.1 3 0.2 26
84.793	100.6	0.79	2 6 -0.3 3 0.5 60	86.830	277.9	0.71	2 6 0.0 3 0.5 26
				86.884	279.1	0.70	2 7 0.0 3 0.6 26
78.784	101.6	0.70	3n 0.4 36-Inch	78.702	252.6	0.57	4n 0.4 26-Inch
84.788	102.8	0.83	4n 0.3 60-Inch	80.873	260.6	0.66	4n 0.5 26-Inch
				85.758	275.1	0.62	4n 0.3 26-Inch
Eggen, 1965 (1):	+1.2,	-0.08;	+1.5, 0.00.	86.836	278.3	0.71	4n 0.4 26-Inch
				Muller, 1957:	-1.6,	-0.03;	-2.0, +0.04;
					-4.8,	-0.06;	-4.9, -0.01.
716	STN 3		00 52.2 -22 36	763	A 2209		00 55.3 +18 57
78.776	254.0	2.01	2 5 +0.4 1 0.5 36	79.890	154.7	1.74	2 5 -0.1 3 0.1 26
78.787	251.3	2.03	2 5 +0.9 1 1.0 36	80.890	153.6	1.72	2 6 +0.4 3 0.1 26
				80.928	153.9	1.92	2 6 +0.1 4 0.2 26
78.782	252.6	2.02	2n 0.8 36-Inch				
				80.569	154.1	1.79	3n 0.1 26-Inch
	B 644		00 53.3 -45 30	768	BU 500		00 55.4 +30 40
78.803	325.7	0.23	2 4 +0.4 1 60	84.962	297.2	0.47	2 5 -0.2 3 0.0 26
78.806	323.4	0.26	2 6 +0.4 1 0.0 60	85.997	295.8	0.43	2 5 -0.4 3 0.0 26
78.808	324.8	0.26	2 4 +0.4 1 0.2 60	86.044	296.7	0.44	2 6 +0.3 3 0.2 26
78.806	324.6	0.25	3n 0.1 60-Inch	85.668	296.6	0.45	3n 0.1 26-Inch
741	A 1258		00 54.4 +54 32	773	A 1259		00 56.1 +54 07
81.867	202.6	0.57	2 5 -0.2 3 0.6 26	81.842	73.7	0.14	2 7 -0.1 4 26
85.997	206.8	0.44	2 5 -0.3 3 0.6 26				
				81.842	73.7	0.14	1n 26-Inch
83.932	204.7	0.50	2n 0.6 26-Inch				
746	STT 20		00 54.6 +19 12	777	HU 1207		00 56.2 +33 53
79.890	221.6	0.44	2 4 -0.2 3 0.8 26	78.932	7.6	0.30	2 6 +0.1 3 0.0 26
79.956	222.8	0.45	2 5 +0.1 3 0.7 26	79.846	6.4	0.36	2 5 0.0 4 0.0 26
80.057	221.3	0.47	2 5 +0.8 3 0.6 26	79.885	4.5	0.30	2 7 +0.1 4 0.2 26
84.962	213.1	0.46	2 4 -0.3 3 0.8 26				
85.997	211.0	0.39	2 5 -0.4 3 0.5 26	79.554	6.2	0.32	3n 0.0 26-Inch
86.044	210.9	0.45	1 6 +0.2 3 1.0 26				
79.968	221.9	0.45	3n 0.7 26-Inch		FIN 78		00 56.4 -59 46
85.668	211.7	0.43	3n 0.8 26-Inch	84.795	273.4	3.68	2 4 +0.5 4 3.0 36
				84.798	272.8	3.73	2 7 +0.3 4 3.0 36
Couteau, 1984:	+2.4,	-0.01;	+1.0, -0.03.	84.796	273.1	3.70	2n 3.0 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

17

784	BU 1099	00 56.8 +60 22	815	A 438	00 58.7 -07 45		
77.760	287.5	0.20	2 5 -0.1 3 0.7 26	78.776	32.8	0.98	2 4 +0.2 1 0.3 36
77.946	283.8	0.12	2 6 0.0 3 0.4 26	78.784	30.1	1.20	2 7 +0.3 1 0.4 36
77.995	288.6	0.18	2 5 -0.2 3 1.0 26	78.787	32.3	1.28	2 6 -0.1 1 0.2 36
81.787	305.9	0.23	2 7 -0.4 4 26	78.782	31.7	1.15	3n 0.3 36-Inch
81.842	304.7	0.20	2 7 0.0 4 0.6 26				
81.867	307.6	0.22	2 5 -0.1 3 0.6 26				
77.900	286.6	0.18	3n 0.7 26-Inch	819	A 1902	00 59.3 -00 41	
81.832	306.1	0.21	3n 0.6 26-Inch	78.792	171.2	0.21	1 7 +0.3 1 0.3 60
Heintz, 1978: -7.6, -0.01; -3.7, -0.01.				78.800	169.4	0.21	1 5 +1.2 1 0.0 60
794	ROE 106	00 57.1 +19 43		78.806	168.0	0.22	1 6 0.0 1 0.3 60
76.920	99.8	2.91	2 5 0.0 3 0.4 26	80.659	172.5	0.25	1 6 -0.1 3 0.4 26
78.031	101.2	3.11	2 5 +0.2 3 0.2 26	81.015	170.3	0.29	1 8 +0.1 3 0.4 26
78.836	100.4	2.86	2 5 +0.1 3 0.3 26	81.787	172.8	0.25	2 5 0.0 4 26
77.929	100.5	2.96	3n 0.3 26-Inch	84.787	173.6	0.26	2 8 0.0 3 0.3 60
797	J 586	00 57.4 +18 29		84.790	177.5	0.23	1 7 0.0 3 0.3 60
79.890	46.5	1.56	2 5 0.0 3 0.0 26	84.793	177.2	0.25	1 5 -0.3 3 0.3 60
81.787	47.5	1.77	2 6 0.0 4 0.2 26	78.800	169.5	0.21	3n 0.2 60-Inch
81.826	45.2	1.68	2 6 -0.1 4 0.2 26	81.154	171.9	0.26	3n 0.5 26-Inch
81.168	46.4	1.67	3n 0.1 26-Inch	84.790	176.1	0.25	3n 0.3 60-Inch
	B 1419	00 57.5 -39 57		Miranian, 1973: -4.4, -0.05; -6.6, -0.01; -8.7, 0.04. Deviations increasing. The later orbit by Costa and Docobo does not agree with its ephemeris.			
84.773	249.2	0.49	2 7 +0.3 3 0.2 60	822	A 1903	00 59.6 -01 12	
84.784	250.0	0.41	2 5 +0.5 3 0.3 60	78.792	311.8	0.27	2 7 +0.4 1 0.3 60
84.790	247.8	0.37	2 7 +0.9 3 0.2 60	78.800	307.0	0.30	2 5 +0.3 1 0.3 60
84.782	249.0	0.42	3n 0.2 60-Inch	78.806	312.0	0.28	2 6 +0.1 1 0.3 60
795	HLD 4	00 57.6 +54 23		84.787	319.7	0.29	2 7 +0.1 3 0.2 60
77.746	169.2	0.24	2 6 0.0 4 0.6 26	84.790	322.2	0.26	2 7 +0.1 3 0.2 60
77.760	171.8	0.24	2 5 0.0 3 0.4 26	84.793	321.3	0.28	2 5 -0.2 3 60
77.946	176.4	0.25	2 6 0.0 3 0.2 26	78.800	310.3	0.28	3n 0.3 60-Inch
77.995	175.8	0.23	2 4 0.0 3 26	84.790	321.1	0.28	3n 0.2 60-Inch
77.862	173.3	0.24	4n 0.4 26-Inch	Baize, 1958: +0.9, -0.10; -0.2, -0.13. Costa, Docobo, 1983: +3.9, -0.02; -2.8, -0.04.			
Closed in and moving fairly rapidly.				829	MAD 1	01 00.6 +47 19	
802	WNC 1	00 58.0 +09 16	85.997	11.5	0.74	2 5 -0.4 3 0.7 26	
86.824	129.6	5.28	2 7 0.0 3 0.2 26	86.824	12.2	0.81	2 7 0.0 3 1.0 26
86.830	131.1	5.33	2 6 0.0 3 0.2 26	86.994	13.3	0.95	4 6 -0.1 3 1.5 26
86.884	130.8	5.35	2 7 0.0 3 0.2 26	86.605	12.3	0.83	3n 1.1 26-Inch
86.846	130.5	5.32	3n 0.2 26-Inch				
805	BU 302	00 58.3 +21 24			I 49	01 00.7 -52 35	
80.659	161.2	0.36	2 7 -0.1 4 1.5 26	78.770	35.9	0.45	2 5 +0.1 1 0.3 36
80.928	161.2	0.39	2 5 0.0 4 1.2 26	78.773	33.9	0.38	2 6 +0.2 1 0.3 36
81.015	161.6	0.42	1 8 +0.1 3 1.6 26	78.784	35.4	0.36	1 8 +0.5 1 0.2 36
86.824	165.8	0.44	2 6 -0.1 3 1.0 26	84.773	31.2	0.40	2 7 +0.3 3 0.3 60
86.884	174.3	0.52	2 6 0.0 3 1.0 26	84.784	33.1	0.35	2 5 +0.5 3 0.2 60
86.994	168.2	0.40	2 7 -0.2 3 1.4 26	84.790	31.0	0.30	2 6 +1.0 3 0.2 60
80.867	161.3	0.39	3n 1.4 26-Inch	78.776	35.1	0.40	3n 0.3 36-Inch
86.901	169.4	0.45	3n 1.1 26-Inch	84.782	31.8	0.35	3n 0.2 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

862	STT 21		01 03.0 +47 22		896	AG 14		01 05.6 +21 07
81.867	177.6	1.04	2 5 -0.1 3 1.0 26		78.932	15.9	0.39	2 6 +0.1 3 0.8 26
84.962	175.2	0.91	2 5 -0.2 3 0.8 26		79.846	14.4	0.46	2 6 0.0 4 0.8 26
85.967	176.6	1.21	2 5 0.0 3 1.2 26		79.885	11.8	0.35	2 7 0.0 4 0.4 26
85.997	179.4	1.02	2 6 -0.3 3 1.2 26					
84.698	177.2	1.04	4n 1.0 26-Inch		79.554	14.0	0.40	3n 0.7 26-Inch
Heintz, 1966: +2.0, +0.12.					Heintz, 1981: -3.4, +0.03.			
874	A 2004		01 03.8 +06 46			I 708		01 05.6 -61 22
80.659	248.6	1.65	4 7 -0.1 4 3.2 26		78.770	85.0	1.38	2 4 +0.1 1 1.6 36
81.787	245.4	1.74	2 4 0.0 4 3.0 26		78.773	86.5	1.21	2 5 +0.2 1 0.8 36
81.826	246.7	1.63	2 5 -0.1 4 3.2 26		78.784	87.4	1.11	2 8 +0.5 1 1.0 36
81.424	246.9	1.67	3n 3.1 26-Inch		78.776	86.3	1.23	3n 1.1 36-Inch
873	HO 213		01 03.9 +35 28			B 1028		01 06.5 -20 03
81.826	91.0	0.25	2 6 0.0 4 0.3 26		78.781	138.1	0.24	2 6 +0.6 1 0.3 36
81.842	95.4	0.28	2 6 0.0 4 0.0 26		78.784	137.3	0.21	2 8 +0.9 1 0.0 36
81.897	92.9	0.25	2 6 -0.1 3 0.2 26		78.789	134.7	0.22	2 7 +0.4 1 0.2 36
81.855	93.1	0.26	3n 0.2 26-Inch		78.785	136.7	0.22	3n 0.2 36-Inch
Baize, 1981: -4.1, 0.00.								
	HJ 3415		01 03.9 -40 39		931	A 2101		01 08.1 +12 04
78.803	139.6	0.96	2 3 +0.4 1 1.2 60		81.897	266.6	0.56	2 6 -0.1 3 0.4 26
78.806	140.2	1.01	2 5 +0.4 1 1.5 60		84.962	254.1	0.49	2 4 -0.1 3 26
78.808	142.0	0.98	2 4 +0.3 1 1.0 60		83.430	260.4	0.52	2n 0.4 26-Inch
78.806	140.6	0.98	3n 1.2 60-Inch					
879	DOO 26		01 04.4 +01 47			HU 1342		01 09.3 -56 36
81.826	184.3	2.17	1 6 0.0 4 0.4 26		84.795	174.6	0.21	2 5 +0.3 4 0.2 36
81.842	182.5	1.99	1 6 0.0 4 0.4 26		84.798	176.6	0.17	2 7 +0.3 4 36
81.897	181.9	1.82	1 7 -0.1 3 0.7 26		84.801	177.6	0.18	1 6 -0.2 4 36
81.855	182.9	1.99	3n 0.5 26-Inch		84.798	176.3	0.19	3n 0.2 36-Inch
					Heintz, 1984: -5.4, -0.05.			
	BRT 120		01 04.8 +25 35		940	STT 515		01 09.5 +47 15
86.830	322.8	4.26	2 6 0.0 3 0.4 26		79.846	141.1	0.44	2 6 0.0 4 0.5 26
87.000	321.3	3.88	2 5 0.0 3 0.1 26		79.885	141.9	0.45	2 7 0.0 4 0.7 26
86.915	322.0	4.07	2n 0.2 26-Inch		79.890	139.9	0.49	2 5 0.0 3 0.6 26
883	A 1515		01 05.0 +36 49		84.962	139.2	0.49	2 5 -0.2 3 0.8 26
76.966	281.7	0.20	3 7 0.0 4 0.3 26		85.997	136.3	0.43	2 6 -0.2 3 0.4 26
77.746	280.5	0.19	2 6 0.0 4 0.2 26		86.824	134.4	0.53	2 7 -0.1 3 0.4 26
77.760	283.1	0.24	2 5 +0.1 3 0.0 26		86.830	135.4	0.52	2 5 0.0 3 0.7 26
77.491	281.8	0.21	3n 0.2 26-Inch		86.884	134.2	0.46	2 7 0.0 3 0.8 26
Costa, Docobo, 1984: +16.6, +0.02.					86.994	133.2	0.49	2 6 -0.1 3 0.6 26
					79.874	141.0	0.46	3n 0.6 26-Inch
					85.480	137.8	0.46	2n 0.6 26-Inch
					86.883	134.3	0.50	4n 0.6 26-Inch
					Baize, 1958: +0.9, +0.01; +1.5, 0.00; -1.1, +0.04.			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

19

974	A 655	01 11.2 +41 15				I 27 CD	01 15.7 -68 52
81.826	299.4	0.33	2 5	0.0 4	0.6 26	78.773	171.1 0.82 2 5 +0.3 1 0.4 36
81.842	304.8	0.34	2 7	-0.1 4	0.6 26	78.789	170.8 0.98 2 6 +0.6 1 0.4 36
81.867	306.1	0.38	2 5	-0.1 3	0.3 26		
81.845	303.4	0.35	3n	0.5	26-Inch	78.781	171.0 0.90 2n 0.4 36-Inch
Costa, Morales, 1978: -4.9, +0.04.						Heintz, 1978: +1.6 -0.22.	
Heintz, 1984: -8.4, +0.04.							
	CPD 26	01 12.3 -49 17				1016	A 2102 01 15.8 +09 47
78.770	44.9	2.08	2 5	+0.2 1	0.4 36	78.932	153.1 0.50 1 6 0.0 3 2.5 26
78.773	45.3	1.95	2 5	+0.2 1	0.4 36	81.842	141.2 0.51 2 8 +0.1 4 2.5 26
78.776	45.7	2.01	2 4	+0.3 1	0.6 36	81.897	145.9 0.44 3 6 0.0 3 2.8 26
78.773	45.3	2.01	3n	0.5	36-Inch	80.890	146.7 0.48 3n 2.6 26-Inch
	JSP 21	01 13.4 -60 14				1039	HU 520 01 17.8 +49 46
84.773	185.9	0.82	1 7	+0.2 3	1.5 60	76.966	342.9 0.22 1 7 0.0 4 0.2 26
84.784	185.0	0.89	4 4	+0.4 3	1.2 60	77.746	346.2 0.26 2 6 -0.1 4 0.2 26
84.790	188.0	0.70	2 6	+0.8 3	1.4 60	77.760	344.4 0.28 2 6 -0.1 3 0.2 26
84.782	186.3	0.80	3n	1.4	60-Inch	77.491	344.5 0.25 3n 0.2 26-Inch
Slow direct motion.						1040	STF 102 01 17.8 +49 01
996	BU 1029 BC	01 13.7 +07 35				86.830	278.1 0.40 2 6 0.0 3 0.8 26
81.897	78.1	1.72	2 7	0.0 3	3.0 26	86.884	276.6 0.42 2 6 0.0 3 0.5 26
85.997	77.2	1.76	2 6	-0.3 3	3.5 26	86.994	277.0 0.43 2 6 -0.2 3 0.8 26
86.044	78.9	1.61	2 5	+0.2 3	3.5 26	86.903	277.2 0.42 3n 0.7 26-Inch
84.646	78.1	1.70	3n	3.3	26-Inch		
999	BU 1100	01 14.7 +60 57				1045	A 937 01 18.1 +47 07
79.846	30.0	0.49	2 6	0.0 4	0.0 26	77.746	41.3 0.26 2 5 0.0 4 0.0 26
79.885	27.8	0.44	2 7	0.0 4	0.0 26	77.760	42.0 0.24 2 5 0.0 3 0.3 26
79.890	30.9	0.43	2 4	0.0 3	0.0 26	77.946	44.0 0.25 2 6 +0.2 3 0.0 26
79.874	29.6	0.45	3n	0.0	26-Inch	77.817	42.4 0.25 3n 0.1 26-Inch
Muller, 1954: +1.6, -0.04.						1066	SEE 11 01 18.8 -26 30
Zulevic, 1972: +0.3, -0.13.						78.776	306.0 1.63 2 5 0.0 1 0.3 36
Baize, 1986: +1.2, -0.05.						78.787	304.9 1.66 2 4 +0.5 1 0.4 36
	FIN 79	01 15.0 -60 07				78.789	305.4 1.65 2 8 +0.8 1 0.3 36
78.770	228.1	2.38	2 4	+0.1 1	3.2 36	78.784	305.4 1.65 3n 0.3 36-Inch
78.784	229.1	2.10	2 8	+0.5 1	3.4 36	1065	HU 521 01 19.4 +48 58
78.789	223.9	2.33	1 6	+0.5 1	2.5 36	81.867	106.3 0.23 2 5 -0.2 3 0.0 26
78.781	227.0	2.27	3n	3.0	36-Inch	81.897	105.4 0.26 2 6 0.0 3 0.0 26
1011	A 1519	01 15.7 +37 11				81.882	105.8 0.24 2n 0.0 26-Inch
81.687	72.3	1.64	2 5	-0.2 3	1.2 26	1077	A 313 01 19.7 -05 19
86.824	73.2	1.54	2 7	0.0 3	1.4 26	78.781	30.9 0.20 2 7 +0.5 1 0.0 36
86.884	76.5	1.75	2 7	0.0 3	1.5 26	78.784	28.9 0.27 2 7 +0.7 1 0.2 36
85.132	74.0	1.64	3n	1.4	26-Inch	78.789	36.2 0.24 2 7 +0.3 1 0.2 36
						78.785	32.0 0.24 3n 0.1 36-Inch
						Heintz, 1975: -1.3, +0.02.	

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

HJ 3430			01 20.4 -57 21			RST 33			01 25.9 -47 54		
78.770	229.3	3.15	2 4	+0.1 1	2.4 36	78.773	326.2	0.66	2 5	+0.3 1	1.2 36
78.773	224.5	3.07	1 6	+0.3 1	1.6 36	78.766	318.6	0.67	2 3	+0.4 1	1.0 36
78.776	228.4	3.02	2 5	+0.3 1	1.5 36	78.787	319.9	0.91	2 4	+0.5 1	1.3 36
						78.789	320.7	1.05	2 7	+0.5 1	1.2 36
78.773	227.4	3.08	3n	1.8	36-Inch	84.773	310.0	1.13	2 7	+0.2 3	1.7 60
						84.784	313.2	1.05	2 3	+0.4 3	0.8 60
						84.787	314.6	1.08	2 7	+0.4 3	1.5 60
1097 BU 4			01 21.3 +11 32			78.781	321.4	0.82	4n	1.2	36-Inch
78.031	113.8	0.51	2 4	-0.1 3	0.2 26	84.781	312.6	1.09	3n	1.3	60-Inch
78.836	118.1	0.36	2 7	+0.1 3	0.8 26	Newburg, 1966: +14.6, -0.14; +9.0, +0.07.					
78.932	112.3	0.35	2 6	+0.1 3	0.8 26	1135 ES 1713	01 26.1 +58 32				
81.787	116.4	0.49	2 5	-0.2 4	0.7 26	77.760	144.8	1.74	2 5	+0.1 3	0.0 26
81.842	115.4	0.49	2 6	0.0 4	0.5 26	77.946	145.3		2 6	+0.1 2	0.0 26
81.867	116.7	0.43	2 4	-0.1 3	0.8 26	78.836	143.8	1.60	2 7	-0.1 3	0.2 26
						78.932	145.3	1.74	2 7	0.0 3	0.1 26
78.600	114.7	0.36	3n	0.6	26-Inch	78.509	144.6	1.69	3n	0.1	26-Inch
81.832	116.2	0.47	3n	0.7	26-Inch						
Muller, 1954: -0.6, -0.05; +3.7, +0.06.						DON 17					
1102 SEE 13			01 21.8 -24 08			01 26.1 -67 50					
78.800	171.8	1.07	2 5	+0.1 1	0.3 60	84.773	280.7	0.76	2 5	+0.4 3	0.8 60
78.808	172.7	1.08	2 3	+0.9 1	0.5 60	84.787	280.8	0.87	2 6	+0.4 3	0.8 60
78.804	172.2	1.08	2n	0.4	60-Inch	84.780	280.8	0.82	2n	0.8	60-Inch
Zimmermann, 1983: -1.6, +0.17.						Heintz, 1966: -6.6, +0.13.					
B 1424			01 21.9 -44 40			1159 I 444	01 27.4 -25 20				
84.773	42.1	0.27	2 6	+0.2 3	60	78.800	109.8	0.53	2 5	+0.1 1	0.4 60
84.787	47.8	0.26	2 8	+0.4 3	0.3 60	78.800	109.8	0.53	1n	0.4	60-Inch
84.790	45.6	0.25	2 7	+0.8 3	0.1 60						
84.783	45.2	0.26	3n	0.2	60-Inch	1158 BU 1164	01 27.7 +05 21				
Decrease in angle and separation.						79.885	156.8	0.44	4 6	0.0 4	0.4 26
1105 STF 115			01 23.3 +58 08			81.015	153.8	0.59	2 7	0.0 3	0.5 26
79.885	137.3	0.26	2 6	+0.1 4	0.0 26	81.787	155.6	0.50	2 5	-0.2 4	0.4 26
80.890	132.3	0.26	2 6	-0.1 3	0.2 26	81.842	159.2	0.41	2 7	0.0 4	0.4 26
80.928	140.9	0.25	2 6	-0.1 4	0.3 26	86.044	155.8	0.36	1 6	0.0 3	0.3 26
81.015	131.1	0.26	2 8	0.0 3	26	86.058	156.6	0.39	1 7	+0.1 3	0.3 26
						86.063	152.0	0.38	2 7	+0.3 3	0.3 26
80.680	135.4	0.26	4n	0.1	26-Inch	81.132	156.4	0.48	4n	0.4	26-Inch
Closed in with little angular change. High inclination and eccentricity indicated.						86.055	154.8	0.38	3n	0.3	26-Inch
1126 A 939			01 25.1 +45 36			van den Bos, 1950: +1.1, +0.04; +2.3, -0.01.					
76.966	106.0	0.14	1 6	0.0 4	0.0 26	Starikova, 1985: -1.9, -0.01; -1.3, -0.07.					
81.897	112.4	0.15	2 7	0.0 4	26	1156 A 940	01 28.0 +58 21				
79.432	109.2	0.14	2n	0.0	26-Inch	77.760	85.3	0.48	2 5	0.0 3	0.1 26
Baize, 1976: -11.4, -0.01.						77.946	86.6		2 5	+0.1 3	0.0 26
Heintz, 1985: -14.4, 0.00.						78.836	86.6	0.47	2 7	0.0 3	0.3 26
						78.932	83.4	0.42	2 6	+0.1 3	0.0 26
						78.509	85.1	0.46	3n	0.1	26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

21

1178	A 2317	01 29.2 +03 47	1282	J 587	01 38.3 +22 32
86.824	54.2 1.10	2 6 0.0 3 0.5 26	81.867	31.1 1.88	2 5 -0.1 3 0.1 26
86.830	51.9 1.06	2 5 -0.1 3 0.8 26	81.897	29.2 1.79	2 6 0.0 4 0.1 26
86.884	51.7 1.17	2 6 0.0 3 0.3 26	81.882	30.2 1.84	2n 0.1 26-Inch
86.846	52.6 1.11	3n 0.5 26-Inch			
1183	A 1910	01 29.7 +22 50		LDS 838	01 38.8 -17 58
79.885	140.7 0.15	2 7 0.0 4 26	78.792	86.9 1.97	2 7 -0.1 1 0.3 60
81.015	126.4 0.22	2 7 0.0 3 26	78.800	83.5 1.92	2 5 0.0 1 0.4 60
81.842	124.6 0.15	2 7 +0.1 4 26	78.806	83.6 1.81	2 6 -0.1 1 0.4 60
80.914	130.6 0.17	3n 26-Inch	78.799	84.7 1.90	3n 0.4 60-Inch
Baize, 1987: +2.7, +0.02. Tokovinen, 1986: +4.4, +0.06. Speckle observations confirm my angle, but give a separation of about 0.12" at this epoch.			Other designations: L 726-8, UV Ceti. Geyer et. al. 1988: +2.0, +0.24. The new orbit satisfies the extensive 1.55m plate material better.		
	HU 1344	01 31.1 -46 23	1297	A 1915	01 39.1 -00 49
84.795	99.5 1.43	2 5 +0.3 4 1.0 36	81.842	263.8 0.56	2 6 +0.1 4 0.6 26
84.798	102.6 1.40	2 7 0.0 4 0.8 36	81.897	264.9 0.72	2 6 +0.1 4 0.8 26
84.801	100.0 1.51	2 8 +0.2 4 0.8 36	86.058	265.4 0.78	2 6 +0.2 3 1.3 26
84.798	100.7 1.45	3n 0.9 36-Inch	83.266	264.7 0.69	3n 0.9 26-Inch
1224	A 1912	01 34.1 +36 12	1294	BU 508	01 39.2 +26 56
76.966	348.2 0.21	1 7 0.0 4 0.3 26	81.842	54.0 0.53	2 6 0.0 4 0.4 26
79.885	357.8 0.21	2 6 0.0 4 0.2 26	81.867	60.0 0.50	2 4 0.0 3 0.4 26
81.015	353.2 0.27	2 7 +0.1 3 0.4 26	81.897	53.7 0.59	2 6 0.0 4 1.0 26
79.289	353.1 0.23	3n 0.3 26-Inch	81.869	55.9 0.54	3n 0.6 26-Inch
There is a large scatter in the measures by different observers.			1300	BU 5	01 39.3 +16 37
1250	BU 507	01 36.0 +26 46	79.846	291.8 0.70	2 5 -0.1 4 2.0 26
81.867	148.7 2.22	2 5 -0.2 3 1.8 26	79.885	292.3 0.70	2 6 +0.1 4 2.0 26
81.897	145.5 2.27	2 6 -0.1 4 1.5 26	80.057	294.2 0.65	2 4 +0.2 3 1.8 26
86.023	146.0 2.03	2 6 0.0 3 1.8 26	79.929	292.8 0.68	3n 1.9 26-Inch
83.262	146.7 2.17	3n 1.7 26-Inch			
1254	STF 138	01 36.0 +07 39	1305	STF 141	01 40.1 +38 58
86.824	55.1 1.78	2 6 0.0 3 0.0 26	76.920	303.0 1.67	2 5 -0.1 3 0.5 26
86.830	57.4 1.53	2 5 -0.1 3 26	76.952	304.1 1.66	2 6 -0.1 3 0.2 26
86.884	54.7 1.70	2 6 0.0 3 0.0 26	76.966	300.6 1.58	2 7 -0.1 4 0.4 26
86.846	55.7 1.67	3n 0.0 26-Inch	77.746	303.6 1.57	2 6 -0.3 4 0.5 26
1266	A 1265 CD	01 37.5 +55 12	77.146	302.8 1.62	4n 0.4 26-Inch
77.760	176.3 0.51	2 5 0.0 3 0.3 26			
77.946	179.1	1 5 +0.1 3 0.3 26		SMW 1	01 42.1 -18 08
78.836	179.4 0.36	2 7 0.0 3 0.3 26	78.792	22.0 0.13	2 6 -0.1 1 60
78.932	183.3 0.55	2 8 0.0 3 0.3 26	78.800	22.2 0.18	2 4 0.0 1 60
78.509	179.7 0.47	3n 0.3 26-Inch	78.806	23.1 0.26	1 4 0.0 1 0.3 60
No measures for 30 years. A slight angular increase.			78.799	22.4 0.19	3n 0.3 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

1345	A 1		01 42.4 -06 46		B 656		01 46.1 -62 48
81.842	240.7	0.73	2 6 +0.1 4 0.2 26	84.795	248.4	1.58	2 5 +0.2 4 0.3 36
81.897	241.3	0.71	2 6 +0.1 4 0.4 26	84.798	247.7	1.48	2 7 -0.1 4 0.5 36
86.023	245.7	0.72	2 6 +0.1 3 0.2 26	84.801	248.0	1.49	2 7 +0.1 4 0.2 36
86.058	243.9	0.82	2 6 0.0 3 0.2 26				
83.955	242.9	0.74	4n 0.2 26-Inch	84.798	248.0	1.52	3n 0.3 36-Inch
Erceg, 1981: +4.2, +0.03.							
1347	HU 10		01 42.5 -12 20	1395	HU 532		01 46.6 +50 24
78.773	323.8	0.70	1 6 +0.9 1 0.5 36	76.728	148.2	0.20	2 7 -0.1 4 0.5 26
78.781	315.1	0.70	2 6 -0.3 1 0.8 36	76.966	152.2	0.19	2 6 +0.1 4 0.4 26
78.784	318.1	0.70	2 7 +0.4 1 0.8 36	77.946	147.0	0.20	2 5 +0.1 3 0.7 26
78.779	319.0	0.70	3n 0.7 36-Inch	78.836	155.0	0.15	2 5 +0.1 3 26
	SLR 3		01 43.1 -54 52	77.619	148.1	0.18	4n 0.5 26-Inch
78.773	208.4	0.52	1 4 +0.3 1 36		I 52		01 47.7 -43 58
78.778	206.7	0.53	1 3 +0.3 1 0.3 36	84.773	49.8	0.25	2 6 +0.1 3 0.2 60
78.787	207.1	0.53	1 4 +0.4 1 0.2 36	84.784	50.3	0.25	2 3 +0.3 3 60
78.789	208.9	0.58	2 7 +0.3 1 0.4 36	84.787	49.6	0.22	2 6 +0.2 3 60
78.782	207.8	0.54	4n 0.3 36-Inch	84.781	49.9	0.24	3n 0.2 60-Inch
				After its close approach a decade ago, the pair is now opening up.			
1359	BU 870		01 44.3 +57 32				
79.846	9.2	1.10	1 4 -0.3 4 1.8 26	1454	BU 1168		01 49.7 -10 22
79.885	6.1	1.03	2 6 +0.1 4 1.5 26	78.781	218.7	0.17	2 6 +0.4 1 36
79.890	14.6	1.00	2 4 -0.4 3 2.0 26	78.784	218.7	0.20	2 7 +0.5 1 36
79.874	10.0	1.04	3n 1.8 26-Inch	78.789	222.7	0.15	2 8 +0.4 1 0.0 36
Popovic, 1972: +6.3, -0.03.				78.785	220.0	0.17	3n 0.0 36-Inch
1369	STF 155		01 44.3 +09 29	1451	HU 422		01 49.7 -14 14
86.824	325.5	4.91	2 6 0.0 3 0.0 26	78.781	88.5	0.16	2 6 +0.3 1 0.0 36
86.830	324.5	5.02	2 5 -0.2 3 0.2 26	78.784	90.9	0.15	2 7 +0.4 1 0.0 36
86.884	325.4	4.97	2 6 0.0 3 0.2 26	78.787	90.4	0.24	2 5 +0.5 1 0.0 36
86.846	325.1	4.97	3n 0.1 26-Inch	78.784	89.9	0.18	3n 0.0 36-Inch
1371	BU 453		01 45.0 +57 07	Baize, 1981: +0.9, +0.02.			
78.836	68.5	0.39	2 7 0.0 3 0.3 26	1483	HU 12		01 51.7 -09 55
78.932	64.5	0.46	2 7 0.0 3 0.8 26	78.800	335.1	1.31	1 3 0.0 1 2.8 60
78.884	66.5	0.42	2n 0.6 26-Inch	78.800	335.1	1.31	1n 2.8 60-Inch
Heintz, 1973: -1.1, -0.04. Zulevic, 1982: +6.9, -0.02. Soulie, 1984: +6.1, -0.10.				1482	HU 1213		01 52.0 +13 26
1380	STF 148		01 46.1 +63 49	81.842	105.2	0.21	2 6 0.0 4 0.0 26
77.760	157.6	0.54	2 5 -0.2 3 0.3 26	86.044	101.0	0.19	2 5 -0.2 3 26
77.946	158.3		2 5 0.0 3 0.2 26	86.058	97.3	0.18	2 6 0.0 3 0.0 26
78.836	158.4	0.47	1 5 0.0 3 0.4 26	86.063	96.8	0.17	2 7 0.0 3 0.0 26
78.932	160.0	0.37	2 6 +0.1 3 0.6 26	81.842	105.2	0.21	1n 0.0 26-Inch
78.509	158.7	0.46	3n 0.4 26-Inch	86.055	98.4	0.18	3n 0.0 26-Inch
Closing in.							

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

23

1466	STF 168	01 52.1 +66 45		I 452	01 55.7 -43 51
76.728	224.2	1.97	2 7 0.0 4 2.0 26	84.773	294.6 0.39 2 6 +0.1 3 0.4 60
76.966	223.1	1.89	2 7 0.0 4 1.6 26	84.787	295.6 0.34 2 6 +0.1 3 0.2 60
77.760	224.4	1.83	2 5 -0.1 3 2.5 26	84.790	292.2 0.33 2 7 +0.3 3 0.2 60
77.151	223.9	1.90	3n 2.0 26-Inch	84.783	294.1 0.35 3n 0.3 60-Inch
	RST 4188	01 52.7 -04 47		1538	STF 186 01 55.9 +01 50
78.781	10.6	0.31	1 6 +0.4 1 0.0 36	79.846	56.2 1.34 2 6 -0.1 4 0.0 26
78.784	10.5	0.39	2 7 +0.5 1 0.1 36	80.887	58.7 1.21 2 4 -0.2 3 0.2 26
78.787	8.5	0.42	1 4 +0.5 1 0.2 36	81.015	59.8 1.34 2 7 0.0 4 0.1 26
78.784	9.9	0.37	3n 0.1 36-Inch	80.583	58.2 1.30 3n 0.1 26-Inch
				Mourao, 1976: +3.6, -0.08.	
1503	BU 260	01 53.2 +15 26		1549	A 818 01 57.3 +48 12
86.824	257.3	1.16	2 6 -0.1 3 0.2 26	76.728	206.8 0.26 2 6 +0.1 4 0.8 26
86.830	256.2	1.35	2 5 -0.3 3 0.5 26	78.836	206.6 0.21 2 5 +0.1 3 0.2 26
86.884	256.0	1.16	2 5 0.0 3 0.3 26	78.932	200.5 0.27 2 7 0.0 3 0.7 26
86.846	256.5	1.22	3n 0.3 26-Inch	78.165	204.6 0.25 3n 0.6 26-Inch
	JSP 31	01 54.1 -77 30		1567	BU 7 01 58.0 -02 04
78.806	12.6	0.14	1 4 +0.4 1 60	80.887	14.1 3.19 1 4 -0.2 3 4.5 26
78.806	12.6	0.14	1n 60-Inch	81.015	13.6 2.94 1 7 +0.1 4 4.5 26
				81.842	15.3 3.04 1 7 +0.1 4 3.4 26
1509	A 953	01 54.7 +59 56		81.248	14.3 3.06 3n 4.1 26-Inch
77.760	68.1	0.79	2 5 -0.1 3 0.0 26		RST 45 01 59.8 -50 34
78.836	69.8	0.71	2 5 0.0 3 0.2 26	84.795	264.9 0.26 2 6 0.0 4 0.4 36
78.932	69.0	0.76	2 7 0.0 3 0.2 26	84.798	263.4 0.26 2 7 -0.2 4 0.3 36
78.509	69.0	0.75	3n 0.1 26-Inch	84.801	265.0 0.29 2 7 0.0 4 0.5 36
1522	STF 183	01 55.1 +28 47		84.798	264.4 0.27 3n 0.4 36-Inch
79.846	180.0	0.28	2 6 -0.2 4 0.3 26		I 265 02 00.9 -43 50
80.887	183.6	0.26	2 5 -0.3 3 0.4 26	78.799	141.6 0.10 2 7 +0.3 1 0.3 60
81.015	176.8	0.26	2 8 0.0 4 0.2 26	78.806	147.4 0.13 3 5 +0.2 1 60
86.824	168.1	0.31	2 7 0.0 3 0.6 26	84.773	192.6 0.18 2 6 +0.1 3 1.0 60
86.884	173.0	0.27	2 5 0.0 3 0.4 26	84.787	188.2 0.16 2 6 +0.2 3 0.3 60
87.000	167.5	0.27	2 5 -0.1 3 26	84.790	191.3 0.17 2 7 +0.3 3 1.0 60
80.583	180.1	0.27	3n 0.3 26-Inch	78.799	144.5 0.12 2n 0.3 60-Inch
86.903	169.5	0.28	3n 0.5 26-Inch	84.783	190.7 0.17 3n 0.8 60-Inch
	Couteau, 1973: +2.6, 0.00; +1.9, -0.03.			A quadrant has been described in the last decade.	
1530	A 2407	01 55.4 +02 57		1598	BU 513 02 01.9 +70 54
81.842	239.1	0.45	2 5 0.0 4 1.5 26	78.932	187.7 0.61 1 6 0.0 3 2.2 26
86.023	252.4	0.42	2 6 0.0 3 0.8 26	79.885	198.1 0.82 4 6 0.0 4 2.4 26
86.058	256.0	0.44	2 6 0.0 3 1.5 26	79.408	192.9 0.72 2n 2.3 26-Inch
86.063	254.0	0.46	2 7 0.0 3 2.0 26		Heintz, 1969: -6.7, +0.04.
84.996	250.4	0.44	4n 1.4 26-Inch		
	Baize, 1983: -1.5, +0.16.				
	Costa, Docobo, 1983: +0.7, +0.08.				

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

1615	STF 202	02 02.1 +02 46		1631	STF 208	02 03.7 +25 56	
79.011	287.0	1.98	2 4 0.0 3 1.0 26	81.015	319.9	1.16	2 7 +0.1 4 1.5 26
79.846	287.6	1.93	2 5 -0.1 3 0.8 26	81.842	325.5	0.86	2 7 +0.1 4 1.3 26
80.057	287.7	2.03	2 4 0.0 3 0.8 26	81.867	321.4	0.91	2 4 0.0 3 1.4 26
86.830	282.6	2.00	2 5 -0.2 3 0.7 26	86.824	328.0	1.08	2 7 0.0 3 1.2 26
86.884	285.0	1.84	2 5 0.0 3 0.6 26	87.000	325.1	1.17	2 4 0.0 3 1.8 26
87.000	280.4	1.84	2 5 -0.1 3 0.8 26				
79.638	287.4	1.98	3n 0.9 26-Inch	81.575	322.3	0.98	3n 1.4 26-Inch
86.905	282.7	1.89	3n 0.8 26-Inch	86.912	326.6	1.12	2n 1.5 26-Inch
Scardia, 1981: +2.8, +0.02; +2.5, -0.02.				Kranjc and Pigoni, 1960: +1.0, +0.02; -1.0, +0.06.			
					DAW 115	02 04.7 -50 28	
1614	A 2216	02 02.2 +12 11		78.806	38.5	1.15	1 5 +0.5 1 0.0 60
86.824	143.1	1.55	2 7 0.0 3 0.6 26	78.806	38.5	1.15	1n 0.0 60-Inch
86.830	145.3	1.64	2 5 -0.2 3 1.4 26				
86.884	144.6	1.64	2 5 0.0 3 1.5 26				
86.846	144.3	1.61	3n 1.2 26-Inch	1645	BU 516	02 05.2 -00 58	
	LDS 65	02 02.3 -26 34		86.058	307.7	0.74	2 6 0.0 3 0.2 26
78.792	63.4	3.63	2 7 +0.1 1 0.3 60	86.063	309.3	0.61	2 6 0.0 3 0.4 26
78.792	63.4	3.63	1n 0.3 60-Inch	86.082	304.3	0.57	2 5 +0.1 3 26
This is the first measure of this pair of late-M dwarfs.				86.068	307.1	0.64	3n 0.3 26-Inch
	HU 1559	02 02.3 -50 44		1655	SEE 16	02 06.0 -22 09	
84.795	121.4	0.64	2 5 +0.1 4 0.2 36	78.773	219.1	0.21	2 7 +0.7 1 0.0 36
84.798	123.8	0.78	2 7 -0.2 4 0.0 36	78.781	212.9	0.23	2 7 +0.4 1 0.0 36
84.801	119.8	0.84	4 7 +0.1 4 0.2 36	78.784	213.3	0.24	2 8 +0.6 1 0.2 36
84.798	121.7	0.75	3n 0.1 36-Inch	78.779	215.1	0.23	3n 0.1 36-Inch
Considerable decrease in angle and separation.					HU 1347	02 06.6 -47 48	
	RST 1230	02 03.1 -40 53		84.795	314.6	0.86	2 6 +0.3 4 0.6 36
84.795	8.0	0.53	2 6 +0.2 4 0.4 36	84.798	312.5	0.82	2 6 +0.5 4 0.8 36
84.798	9.6	0.54	2 7 +0.4 4 0.4 36	84.801	313.8	0.84	2 7 +0.4 4 0.8 36
84.801	9.2	0.48	2 7 +0.3 4 0.6 36	84.798	313.6	0.84	3n 0.7 36-Inch
84.798	8.9	0.52	3n 0.5 36-Inch		FIN 14	02 11.1 -35 40	
	BRT 355	02 03.5 -05 48		78.792	145.6	3.57	2 7 +0.2 1 2.5 60
78.781	55.9	3.69	2 6 +0.4 1 0.2 36	78.800	145.6	3.63	2 5 +0.9 1 2.2 60
78.787	56.1	3.61	2 5 +0.1 1 0.4 36	78.796	145.6	3.60	2n 2.4 60-Inch
78.789	53.3	3.63	2 8 +0.2 1 0.3 36	Although the motion appears rectilinear, it cannot be reconciled with the large proper motion. Physical?			
78.785	55.1	3.64	3n 0.3 36-Inch	1696	STF 226	02 12.2 +23 58	
				86.830	239.2	1.77	2 6 -0.1 3 1.2 26
				86.884	235.7	1.82	2 6 0.0 3 0.8 26
				87.000	237.8	1.90	2 4 -0.1 3 1.0 26
				86.905	237.6	1.83	3n 1.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

25

	RST 2275	02 12.7 33 54	1737	STF 234	02 17.3 +61 21
84.773	94.2 0.22	2 6 0.0 3 0.0 60	86.830	232.8 0.78	4 5 -0.3 3 0.8 26
84.787	99.2 0.17	2 8 +0.1 3 0.0 60	86.884	230.6 0.84	2 5 +0.1 3 0.7 26
84.780	96.7 0.20	2n 0.0 60-Inch	86.857	231.7 0.81	2n 0.8 26-Inch
About a 40 degree decrease in angle.			Scardia, 1981: -3.7, -0.03.		
1701	HO +97	02 12.8 +37 22		HJ 3494	02 19.8 -35 26
86.058	83.4 0.46	2 5 0.0 3 0.8 26	78.792	265.8 1.83	2 7 +0.3 1 0.2 60
86.063	85.2 0.53	2 7 0.0 3 0.6 26	78.800	265.0 1.90	2 5 +0.3 1 0.3 60
86.082	89.5 0.49	2 5 +0.2 3 0.8 26	78.796	265.7 1.86	2n 0.2 60-Inch
86.068	86.0 0.49	3n 0.7 26-Inch	Heintz, 1982: +2.4, +0.10.		
1709	STF 228	02 14.0 +47 29	1777	HU 1037	02 20.6 +63 22
79.846	267.7 1.05	2 5 -0.2 4 0.4 26	78.836	330.5 0.38	1 5 -0.2 3 0.2 26
79.885	268.3 1.13	2 6 -0.2 4 0.5 26	78.932	332.0 0.46	2 7 -0.2 3 0.3 26
80.057	267.1 1.11	2 5 -0.4 3 0.5 26	79.885	331.3 0.45	2 6 -0.2 4 0.9 26
86.824	272.2 1.16	7 0.0 3 0.4 26	79.218	331.3 0.43	3n 0.5 26-Inch
86.830	272.9 1.13	2 5 -0.3 3 0.7 26		FIN 81	02 21.0 -52 42
86.884	273.1 0.97	2 5 0.0 3 0.8 26	84.787	60.8 0.96	1 7 0.0 3 2.6 60
79.929	267.7 1.10	3n 0.5 26-Inch	84.790	69.6 0.88	2 7 +0.1 3 2.5 60
86.846	272.7 1.09	3n 0.6 26-Inch	84.788	65.2 0.92	2n 2.5 60-Inch
Heintz, 1984: 0.0, +0.05; -0.6, +0.01.			Unchanged in 52 years.		
1720	HU 807	02 14.4 +34 54	1786	STF 248	02 21.1 +42 47
81.015	142.2 0.29	2 8 +0.1 4 0.2 26	78.932	87.2 0.26	2 6 -0.1 3 0.3 26
81.842	144.8 0.44	2 7 0.0 4 0.1 26	79.846	82.5 0.28	2 5 -0.2 4 0.0 26
81.428	143.5 0.36	2n 0.1 26-Inch	79.885	82.0 0.31	2 6 -0.2 4 0.2 26
	RST 2276	02 15.1 -39 48	81.867	64.6 0.26	2 4 -0.3 3 26
78.792	114.1 0.26	2 6 +0.3 1 0.0 60	79.554	83.9 0.28	3n 0.2 26-Inch
78.800	113.0 0.22	2 4 +0.7 1 0.2 60	81.867	64.6 0.26	1n 26-Inch
78.806	111.6 0.23	2 5 +0.4 1 0.0 60	Popovic, 1980: +0.1, -0.10; -10.1, -0.10.		
78.800	112.9 0.24	3n 0.1 60-Inch	Couteau, 1984: +1.2, -0.02; -3.5, +0.01.		
Considerable direct motion.			1796	HU 425	02 21.2 +21 36
1733	HTG 1	02 15.8 -18 14	76.966	180.9 0.37	1 7 -0.1 4 0.5 26
78.773	102.7 1.59	2 6 +0.4 1 0.3 36	78.064	185.8 0.39	1 7 -0.1 3 0.3 26
78.781	102.4 1.62	2 5 +0.4 1 0.7 36	78.083	176.2 0.38	1 5 +0.4 3 0.4 26
78.784	101.5 1.59	2 8 +0.2 1 0.8 36	77.704	181.0 0.38	3n 0.4 26-Inch
78.779	102.2 1.60	3n 0.6 36-Inch	Heintz, 1973: +9.1, +0.11.		
Heintz, 1978: +3.2, -0.01.			1812	HU 426	02 21.6 -14 34
1728	HU 1036	02 16.1 +35 03	78.773	350.6 0.61	1 6 +0.6 1 0.4 36
81.015	344.5 0.61	2 7 +0.2 4 0.3 26	78.781	357.3 0.68	2 5 +0.4 1 36
81.842	349.4 0.55	2 6 0.0 4 0.0 26	78.784	351.8 0.74	2 7 +0.2 1 0.6 36
86.023	345.9 0.46	2 6 -0.1 3 0.0 26	78.779	353.2 0.68	3n 0.5 36-Inch
86.063	347.0 0.48	2 6 0.0 3 0.3 26			
83.736	346.7 0.52	4n 0.2 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

27

1872	A 1275	02 29.1 +56 37	1990	HU 1216	02 37.1 -11 12		
76.920	23.1	0.72	2 3 -0.3 3 0.0 26	78.784	351.3	0.48	1 7 +0.3 1 1.6 36
78.064	19.9	0.76	2 7 0.0 3 0.0 26	78.789	350.5	0.54	1 8 0.0 1 2.0 36
78.083	22.3	0.72	2 5 +0.2 3 0.1 26	78.786	350.9	0.51	2n 1.8 36-Inch
77.689	21.8	0.73	3n 0.0 26-Inch	Erceg, 1970: -2.4, +0.12.			
1913	A 660	02 31.4 +42 34	1993	A 2219	02 37.9 +20 03		
81.842	311.8	0.46	2 5 0.0 4 0.1 26	85.080	149.5	0.31	2 7 0.0 3 0.0 26
86.023	307.3	0.41	2 5 0.0 3 0.3 26	86.023	156.9	0.39	2 5 0.0 3 0.4 26
86.044	307.6	0.39	2 6 -0.3 3 0.2 26	86.044	150.2	0.33	2 6 -0.3 3 0.0 26
84.636	308.9	0.42	3n 0.2 26-Inch	85.716	152.2	0.34	3n 0.1 26-Inch
1927	A 1927	02 32.3 +35 43	2011	BU 1315	02 39.1 +14 30		
76.703	185.8	0.81	1 6 0.0 3 2.5 26	86.830	128.5	1.58	2 5 0.0 3 1.5 26
78.064	189.6	0.82	2 6 +0.2 3 2.0 26	87.095	128.0	1.77	2 5 +0.2 3 2.6 26
78.083	187.2	0.72	2 5 +0.3 3 2.2 26	87.098	129.6	1.57	2 7 +0.2 3 0.8 26
77.617	187.5	0.78	3n 2.2 26-Inch	87.008	128.7	1.64	3n 1.6 26-Inch
1938	STT 42	02 33.3 +52 19	2013	A 2336	02 39.2 +03 43		
86.063	290.9	0.19	2 7 0.0 3 26	76.966	313.0	2.79	2 7 0.0 4 3.5 26
86.824	291.4	0.18	2 7 -0.2 3 26	77.946	315.8		2 6 0.0 3 3.8 26
86.444	291.2	0.18	2n 26-Inch	78.932	315.0	2.88	2 7 0.0 3 4.0 26
Baize, 1985: -0.7, +0.02.			79.885	315.0	2.78	2 6 -0.1 4 4.0 26	
	B 674	02 33.6 -39 11	78.594	314.3	2.82	3n 3.8 26-Inch	
78.792	21.2	0.24	2 5 +0.3 1 0.3 60	2010	A 2023	02 39.4 +25 52	
78.800	20.3	0.21	2 5 +0.3 2 0.3 60	85.080	223.6	0.51	4 7 0.0 3 0.2 26
84.773	13.8	0.21	2 7 0.0 3 0.2 60	86.824	225.1	0.57	2 7 0.0 3 0.2 26
84.787	15.4	0.18	2 8 +0.1 3 0.3 60	86.830	222.1	0.54	2 6 -0.1 3 0.3 26
84.790	15.2	0.18	2 8 +0.2 3 0.4 60	86.245	223.6	0.54	3n 0.2 26-Inch
78.796	20.8	0.22	2n 0.3 60-Inch				
84.783	14.8	0.19	3n 0.3 60-Inch				
	DOW 36	02 34.9 -41 57					
78.792	109.6	0.29	2 5 +0.5 1 0.5 60		HU 1350	02 39.6 -54 25	
78.800	112.6	0.29	2 4 +0.3 1 0.6 60	84.787	72.6	0.60	2 7 +0.1 3 0.6 60
78.806	108.4	0.32	2 4 +0.3 1 0.7 60	84.790	69.2	0.58	2 8 +0.3 3 0.6 60
78.800	110.2	0.30	3n 0.6 60-Inch	84.788	70.9	0.59	2n 0.6 60-Inch
	RST 54	02 35.9 -45 33		About 100 degrees retrograde motion.			
84.795	175.9	0.70	2 6 +0.2 4 36		I 386 BC	02 39.7 -59 33	
84.798	180.5	0.63	2 6 +0.2 4 0.2 36	84.787	7.0	0.68	2 7 +0.2 3 0.4 60
84.801	179.9	0.64	2 6 0.0 4 0.2 36	84.790	8.6	0.65	2 7 +0.2 3 0.4 60
84.798	178.8	0.66	3n 0.2 36-Inch	84.788	7.8	0.66	2n 0.4 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

2044	SEE 19		02 40.5 -24 08		DON 40		02 45.6 -20 04
84.773	291.8	0.26	2 5 +0.1 3 0.5 60	84.773	274.3	0.32	2 6 +0.1 3 0.2 60
84.776	291.2	0.31	2 6 +0.1 3 0.3 60	84.787	268.6	0.33	2 7 +0.6 3 0.0 60
84.787	292.4	0.27	2 7 +0.5 3 0.4 60				
84.779	291.8	0.28	3n 0.4 60-Inch	84.780	271.4	0.32	2n 0.1 60-Inch
Closing in.				2111	BU 83		02 46.0 -04 58
2043	STT 45		02 40.9 +04 52	80.095	34.5	0.74	1 5 +0.1 3 2.0 26
86.023	276.7	0.99	2 5 0.0 3 2.2 26	80.104	34.3	0.65	2 5 +0.2 3 2.8 26
86.044	274.3	1.03	2 6 -0.2 3 1.8 26	80.117	39.2	0.63	2 5 +1.0 3 2.0 26
86.058	276.7	1.00	2 7 -0.1 3 2.0 26	80.120	35.1	0.88	1 5 +0.7 3 2.0 26
86.042	275.9	1.01	3n 2.0 26-Inch	80.109	35.8	0.72	4n 2.2 26-Inch
				Erceg, 1984: -2.8, +0.06.			
	B 1923		02 41.4 -71 27	2133	A 2411		02 47.7 +01 42
84.795	77.8	0.29	2 6 +0.3 4 0.6 36	76.966	279.9	0.26	2 6 0.0 4 1.2 26
84.798	81.5	0.26	4 4 +0.3 4 0.8 36	77.946	280.2		2 5 0.0 3 1.0 26
84.801	84.7	0.27	2 6 +0.1 4 0.6 36	78.932	275.1	0.19	2 5 0.0 3 1.2 26
84.798	81.3	0.27	3n 0.7 36-Inch	79.885	278.7	0.25	2 5 -0.2 4 1.5 26
There has been a large change since the last measure in 1939. Deserves attention.				78.594	277.9	0.23	3n 1.3 26-Inch
				Closed in with little angular change.			
2051	HU 559		02 42.4 +49 25	2137	HU 604		02 48.4 +36 20
86.058	37.9	0.20	2 6 -0.2 3 26	76.728	203.9	1.97	2 6 -0.1 4 1.5 26
86.063	33.6	0.23	2 6 -0.1 3 26	77.946	200.7	1.99	2 6 +0.1 3 2.4 26
86.060	35.8	0.22	2n 26-Inch	78.064	206.8	1.94	2 6 +0.1 3 1.6 26
2075	A 452		02 42.9 -06 29	77.579	203.8	1.97	3n 1.8 26-Inch
78.770	113.7	1.90	2 5 +0.1 1 0.0 36				
78.773	113.7	1.82	2 6 +0.5 1 0.1 36		FIN 82		02 49.4 -59 38
78.781	112.6	1.95	2 4 +0.2 1 0.1 36	78.789	305.0	0.86	2 8 +0.3 1 0.6 36
78.775	113.3	1.89	3n 0.1 36-Inch	78.806	304.5	1.00	2 4 +0.1 1 0.5 60
	HJ 3527		02 43.4 -40 32	84.787	302.8	0.98	2 6 +0.2 3 0.7 60
78.792	41.2	2.09	2 7 +0.5 1 0.3 60	84.790	302.8	0.94	2 8 +0.3 3 0.8 60
78.800	40.4	2.16	2 5 +0.4 1 0.2 60	78.789	305.0	0.86	1n 0.6 36-Inch
78.796	40.8	2.12	2n 0.2 60-Inch	82.794	303.4	0.97	3n 0.7 60-Inch
					B 1437		02 50.1 -64 01
2099	STF 303		02 44.7 -01 58	84.795	261.8	0.25	2 5 +0.3 4 36
86.824	180.0	5.94	1 7 0.0 3 0.4 26	84.801	267.1	0.20	2 5 +0.2 4 0.0 36
86.830	180.3	5.85	1 5 0.0 3 0.7 26				
87.095	180.5	5.85	2 5 +0.1 3 0.6 26	84.798	264.4	0.22	2n 0.0 36-Inch
86.916	180.3	5.88	3n 0.6 26-Inch	Motion direct. Quadrant in doubt.			
					B 1926		02 50.3 -17 33
2103	A 453		02 45.3 -05 29	78.784	345.9	0.29	2 8 +0.3 1 0.0 36
78.789	99.0	0.69	2 8 +0.2 1 0.6 36	78.789	345.1	0.27	2 8 0.0 1 0.3 36
78.789	99.0	0.69	1n 0.6 36-Inch	78.786	345.5	0.28	2n 0.2 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

29

2168	ES 557	02 51.1 +48 06		2200	BU 524	02 53.7 +38 21	
75.025	321.1	5.98	4 4 -0.2 3 3.5 26	76.703	321.5	0.18	3 7 0.0 4 1.2 26
76.703	321.4	5.81	2 7 -0.1 3 2.5 26	76.966	314.3	0.21	3 7 0.0 4 0.6 26
78.064	321.0	6.04	2 6 0.0 3 2.2 26	77.946	312.6	0.18	2 6 +0.1 3 1.0 26
				78.097	301.1	0.17	3 6 +0.2 4 0.5 26
76.597	321.2	5.94	3n 2.7 26-Inch	78.113	311.6	0.17	4 7 +0.4 3 0.8 26
				77.565	312.2	0.18	5n 0.8 26-Inch
	HEI 99	02 51.3 +15 15		da Silva-Pinheiro, 1970: -2.5, -0.01.			
86.023	342.6	0.61	2 5 0.0 3 0.0 26		I 1480	02 53.8 -44 37	
86.044	349.5	0.83	1 6 -0.4 3 0.0 26	78.797	129.2	0.51	2 6 +0.4 1 0.8 60
86.058	347.6	0.76	1 6 -0.3 3 0.0 26	78.800	127.2	0.55	2 5 +0.4 1 1.0 60
86.042	346.6	0.73	3n 0.0 26-Inch	78.796	128.2	0.53	2n 0.9 60-Inch
	VOU 36	02 51.5 +01 42		2231	DAW 77	02 56.4 -28 57	
85.080	8.9	0.31	1 7 0.0 3 0.3 26	84.773	66.7	0.16	2 6 +0.2 3 60
86.044	5.3	0.36	1 6 -0.3 3 0.6 26	84.776	68.5	0.16	2 6 +0.2 3 60
86.058	11.1	0.35	1 4 -0.1 3 0.0 26	84.784	64.9	0.15	2 6 +0.2 3 0.2 60
85.727	8.4	0.34	3n 0.3 26-Inch	84.778	66.7	0.16	3n 0.2 60-Inch
2186	SEE 21	02 51.7 -21 17		2230	HO 317	02 57.0 +17 14	
84.773	61.4	0.11	2 6 +0.2 3 60	86.058	308.6	3.68	2 6 -0.1 3 1.5 26
84.787	62.7	0.13	2 5 +0.2 3 60	86.063	309.3	3.49	2 7 -0.3 3 0.8 26
84.787	53.4	0.12	2 7 +0.5 3 60	86.085	309.4	3.60	2 6 -0.2 3 1.5 26
84.781	59.2	0.12	3n 60-Inch	86.069	309.1	3.59	3n 1.3 26-Inch
Has closed in with only a slow angular decrease.				The magnitude difference is much less than the catalog value.			
	HU 1562	02 51.7 -52 33		2242	BU 741	02 57.2 -24 58	
78.789	59.3	0.45	2 7 +0.3 1 0.4 36	78.770	325.7	0.63	2 5 0.0 1 0.3 36
84.790	59.9	0.47	2 7 +0.5 3 0.7 60	78.773	326.7	0.57	2 7 +0.4 1 0.2 36
84.801	56.8	0.35	2 4 +0.2 4 0.6 36	78.781	322.7	0.62	1 4 +0.7 1 0.0 36
81.795	58.0	0.40	2n 0.5 36-Inch	84.776	329.0	0.78	2 5 +0.1 3 0.0 60
84.790	59.9	0.47	1n 0.7 60-Inch	84.784	327.4	0.73	2 5 0.0 3 0.2 60
Heintz, 1979: +3.1, -0.12; +5.4, -0.05.				84.787	329.6	0.76	2 8 +0.6 3 0.0 60
	FIN 16	02 52.3 -33 17		78.775	325.0	0.61	3n 0.2 36-Inch
84.790	253.6	3.35	2 8 +0.3 3 3.2 60	84.782	328.7	0.76	3n 0.1 60-Inch
84.790	253.6	3.35	1n 3.2 60-Inch	van den Bos, 1956: +0.7, -0.10; -0.8, -0.09.			
2196	A 973	02 53.5 +31 34		2236	A 2413	02 57.3 +01 53	
76.703	244.6	0.40	2 7 -0.2 3 1.0 26	78.932	76.4	0.26	2 5 0.0 3 0.1 26
76.966	250.6	0.36	2 6 0.0 4 0.8 26	79.885	80.8	0.26	1 6 -0.1 4 0.1 26
77.946	248.1	0.39	2 5 0.0 3 0.5 26	80.057	85.4	0.31	2 3 +0.3 3 26
77.205	247.8	0.38	3n 0.8 26-Inch	86.058	105.5	0.28	2 6 0.0 3 0.0 26
				86.063	103.3	0.33	2 6 -0.2 3 26
				86.085	104.5	0.31	2 6 -0.2 3 0.2 26
				79.625	80.9	0.28	3n 0.1 26-Inch
				86.069	104.4	0.31	3n 0.1 26-Inch
				Scardia, 1980: +0.8, -0.04; +2.4, -0.02.			

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

2246	BU 1173	02 58.6 +24 08		I 1144	03 04.0 -40 07
76.728	80.6	0.14	2 6 -0.1 4 0.1 26	78.792	229.6 0.17 2 6 +0.3 1 0.0 60
76.966	78.8	0.19	2 6 0.0 4 0.0 26	78.800	232.6 0.15 2 5 +0.4 1 60
77.946	80.3	0.24	2 6 +0.1 3 0.0 26	78.808	238.3 0.13 2 3 +0.4 1 60
86.830	87.6	0.25	2 6 -0.2 3 0.0 26		
87.095	91.5	0.30	2 5 +0.1 3 0.1 26	78.800	233.5 0.15 3n 0.0 60-Inch
87.098	86.9	0.24	2 7 +0.1 3 0.0 26		
87.103	88.7	0.26	2 5 0.0 3 0.0 26		
				2337	A 2029 BC 03 05.2 +07 12
77.213	79.9	0.19	3n 0.0 26-Inch	76.703	42.1 0.72 2 7 +0.1 4 0.0 26
87.032	88.7	0.26	4n 0.0 26-Inch	78.097	47.2 0.69 2 6 +0.1 4 0.3 26
				78.108	51.7 0.81 1 6 +0.4 3 0.3 26
Baize, 1987:	-4.7, -0.01; -5.1, +0.06.			77.636	47.0 0.74 3n 0.2 26-Inch
2253	BU 525	02 58.9 +21 37		2336	STF 346 03 05.5 +25 15
81.015	260.4	0.57	2 7 +0.1 4 0.3 26	79.885	235.8 0.22 2 6 0.0 4 0.0 26
81.095	260.0	0.57	2 6 -0.1 3 0.0 26	81.015	249.3 0.22 2 7 +0.1 4 26
81.100	258.7	0.45	2 7 0.0 3 0.1 26	81.095	240.4 0.22 2 6 0.0 3 0.0 26
86.058	261.0	0.49	2 7 0.0 3 0.0 26	81.100	239.1 0.24 2 7 0.0 3 0.2 26
86.063	261.3	0.41	2 7 -0.1 3 0.0 26	86.824	246.1 0.28 2 7 -0.1 3 0.0 26
86.082	263.2	0.49	2 5 -0.3 3 0.0 26	86.830	247.0 0.29 2 6 -0.1 3 0.0 26
				87.095	247.0 0.28 2 5 0.0 3 26
81.070	259.7	0.53	3n 0.1 26-Inch	87.098	248.6 0.29 2 7 +0.1 3 0.0 26
86.068	261.8	0.46	3n 0.0 26-Inch		
				80.774	241.2 0.22 4n 0.1 26-Inch
Costa, Morales, 1978:	+3.1, +0.05;			86.962	247.2 0.28 4n 0.0 26-Inch
	+2.3, -0.03.				
2268	A 2610	02 59.4 -10 16		Heintz, 1981:	-1.4, -0.01; -0.4, 0.00.
78.770	6.5	0.43	1 5 0.0 1 0.0 36		
78.773	6.5	0.33	1 7 +0.4 1 0.0 36	RST 2294	03 05.6 -23 28
78.781	8.6	0.34	1 4 +0.7 1 0.0 36	84.773	335.2 0.40 2 5 +0.2 3 60
				84.776	342.9 0.40 2 6 +0.2 3 60
78.775	7.2	0.37	3n 0.0 36-Inch	84.784	335.4 0.41 2 4 +0.2 3 60
				84.778	337.8 0.40 3n 60-Inch
2283	A 2611	03 00.3 -11 17			Angular decrease and separation increase.
78.770	349.3	0.22	3 5 +0.1 1 0.0 36	2355	A 2416 03 06.6 +00 46
78.773	343.1	0.18	2 7 +0.5 1 36	81.100	188.3 0.45 1 7 +0.1 3 0.2 26
78.784	342.4	0.16	2 6 +0.2 1 36	81.842	187.9 0.48 2 5 0.0 4 26
				85.080	186.4 0.52 1 7 -0.1 3 0.4 26
78.776	344.9	0.19	3n 0.0 36-Inch	82.674	187.5 0.48 3n 0.3 26-Inch
Baize, 1987:	-4.5, -0.01.			2353	AG 61 03 06.9 +20 52
Rapid direct motion. Quadrant in doubt.				86.058	21.6 0.54 1 7 0.0 3 0.5 26
				86.063	22.4 0.65 2 6 -0.2 3 0.5 26
				86.082	18.1 0.57 2 4 -0.3 3 0.5 26
				86.068	20.7 0.59 3n 0.5 26-Inch
2312	BU 11	03 02.7 -07 41			
78.932	71.4	1.67	2 6 -0.1 3 3.4 26	RST 59	03 07.4 -56 45
79.885	69.5	1.57	2 5 -0.1 4 3.4 26	78.792	43.4 1.10 1 4 +0.5 1 0.2 60
80.104	69.6	1.58	2 5 -0.1 3 3.2 26	78.800	43.7 1.17 2 5 +0.4 1 0.2 60
				78.796	43.6 1.14 2n 0.2 60-Inch
79.640	70.2	1.61	3n 3.3 26-Inch		
2322	A 1824	03 04.0 +28 31			
81.095	271.9	0.25	2 5 0.0 3 26		
81.100	274.0	0.27	2 7 +0.1 3 0.8 26		
85.080	266.7	0.31	2 7 0.0 3 1.0 26		
82.425	270.9	0.28	3n 0.9 26-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

31

2357	A 1533	03 07.7 +36 52		FIN 83	03 14.0 -55 58
76.728	6.6	1.05	2 6 -0.1 3 0.5 26	78.784	189.8 2.44 1 7 +0.2 1 2.5 36
78.083	4.0	1.18	2 5 +0.1 3 0.1 26	78.789	188.6 2.42 1 7 0.0 1 2.4 36
78.097	5.7	1.17	2 7 0.0 4 0.2 26		
77.636	5.4	1.13	3n 0.2 26-Inch	78.786	189.2 2.43 2n 2.4 36-Inch
				Unchanged.	
2366	BU 528	03 08.4 -03 35		2417	A 325 03 14.3 +09 11
78.770	10.3	0.42	1 5 -0.1 1 0.0 36	81.842	209.3 1.11 2 5 0.0 4 1.0 26
78.773	7.9	0.35	1 7 +0.5 1 0.0 36	85.080	207.6 1.20 2 7 0.0 3 0.7 26
78.781	13.2	0.59	2 3 +0.7 1 36	86.044	204.7 1.12 1 6 0.0 3 0.8 26
78.932	7.1	0.35	1 6 0.0 3 0.2 26	84.322	207.2 1.14 3n 0.8 26-Inch
79.885	6.3	0.43	1 5 -0.1 3 0.2 26		
80.095	10.9	0.44	1 5 -0.1 3 0.2 26	FIN 84	03 14.4 -60 30
78.775	10.5	0.45	3n 0.0 36-Inch	78.784	114.1 0.61 2 6 +0.3 1 0.0 36
79.637	8.1	0.41	3n 0.1 26-Inch	78.789	114.1 0.61 2 7 +0.1 1 0.2 36
				78.786	114.1 0.61 2n 0.1 36-Inch
2373	A 2030	03 09.6 +05 12		Slight increase in angle and distance.	
80.095	283.9	0.28	2 5 0.0 3 26		
80.104	282.9	0.32	2 6 +0.2 3 0.0 26	2407	HU 1054 03 14.8 +66 14
80.117	278.6	0.25	2 5 +0.5 3 0.1 26	76.966	236.4 0.50 2 7 0.0 4 0.2 26
80.120	284.0	0.28	2 6 +0.4 3 0.3 26	77.946	232.8 0.36 2 5 -0.2 3 0.2 26
86.058	265.8	0.25	2 6 0.0 3 0.0 26	78.064	235.3 0.48 2 5 -0.1 3 0.2 26
86.063	257.9	0.26	2 6 -0.1 3 0.0 26	78.083	233.8 0.43 2 5 0.0 3 0.4 26
86.082	263.9	0.26	2 5 -0.3 3 26		
86.085	261.0	0.31	2 5 -0.2 3 26	77.765	234.6 0.44 4n 0.2 26-Inch
80.109	282.4	0.28	4n 0.1 26-Inch		
86.072	262.2	0.27	4n 0.0 26-Inch	1 463	03 15.3 -42 43
Couteau, 1963: -4.3 -0.06; -1.9, -0.02.				78.792	117.6 0.57 2 4 +0.2 1 0.8 60
				78.800	114.9 0.76 2 5 +0.4 1 0.8 60
2377	STI 50	03 12.6 +71 33		78.796	116.2 0.66 2n 0.8 60-Inch
76.728	171.4	1.22	1 6 -0.1 4 0.0 26	Direct motion, distance unchanged.	
76.966	171.1	1.09	1 6 0.0 4 0.0 26		
77.946	171.7		2 5 +0.1 3 0.0 26	2439	A 2224 03 16.3 +19 20
78.064	169.8	1.13	1 6 -0.2 3 0.1 26	77.106	332.5 1.00 1 6 +0.2 3 1.3 26
77.426	171.0	1.15	3n 0.0 26-Inch	78.064	333.0 0.84 1 5 +0.1 3 1.8 26
Popovic, 1973: +2.2, +0.04.				78.083	340.3 0.95 1 5 +0.1 3 1.5 26
				77.751	335.3 0.93 3n 1.5 26-Inch
2416	STF 367	03 14.0 +00 44			
78.932	145.8	1.02	2 7 -0.1 3 0.0 26	2442	A 1285 03 16.4 -00 26
79.885	145.4	1.28	2 5 0.0 4 0.0 26	73.932	289.2 1.94 2 5 0.0 3 0.4 26
80.057	144.2	1.14	2 3 +0.1 3 0.2 26	80.095	291.3 1.89 2 5 -0.1 3 0.6 26
86.058	141.1	1.06	2 6 0.0 3 0.0 26	80.104	291.0 1.90 2 5 +0.1 3 0.5 26
86.063	142.4	1.07	2 6 -0.1 3 0.0 26	79.710	290.5 1.91 3n 0.5 26-Inch
86.082	139.9	1.08	2 5 -0.2 3 26		
79.625	145.1	1.15	3n 0.0 26-Inch		
86.068	141.1	1.08	3n 0.0 26-Inch		
Heintz, 1963: +1.4, +0.15; +0.6, +0.05.					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

2444	A 2032	03 16.8 +05 02	2467	DAW 78	03 18.7 -29 31
81.100	273.4	2.56	2 7	0.0 3	2.2 26
85.080	273.8	2.48	2 7	0.0 3	2.8 26
86.023	274.6	2.70	2 5	-0.2 3	3.0 26
84.068	273.9	2.58	3n	2.7	26-Inch
2436	STT 52	03 17.6 +65 39	2464	BU 1177	03 18.9 -01 02
76.728	76.7	0.41	2 6	0.0 4	0.4 26
76.966	75.4	0.45	2 7	0.0 4	0.2 26
77.946	79.8	0.35	2 5	-0.2 3	0.5 26
78.064	74.9	0.39	2 6	0.0 3	0.4 26
86.824	69.6	0.47	2 7	0.0 3	0.2 26
86.830	70.5	0.43	2 6	-0.3 3	0.5 26
87.095	70.0	0.46	2 5	0.0 3	0.2 26
87.098	72.0	0.52	2 6	0.0 3	0.2 26
77.426	76.7	0.40	4n	0.4	26-Inch
86.962	70.5	0.47	4n	0.3	26-Inch
Heintz, 1963: +6.1, -0.05; +7.3, +0.04.					
2446	STT 53	03 17.8 +38 38	78.784	69.7	0.22
79.885	267.5	0.90	2 5	0.0 4	0.5 26
80.095	264.4	0.79	2 5	0.0 3	0.8 26
80.104	266.7	0.94	2 5	+0.1 3	0.5 26
87.103	260.6	0.86	2 5	-0.1 3	0.7 26
87.112	260.7	0.84	2 5	-0.1 3	0.8 26
87.114	262.5	0.73	2 7	+0.1 3	0.1 26
80.028	266.2	0.88	3n	0.6	26-Inch
87.110	261.3	0.81	3n	0.5	26-Inch
Rabe, 1948: +0.4, +0.02; -0.3, -0.03.					
Zulevic, 1984: +3.2, +0.02; +2.7, -0.05.					
2446	B 1446	03 17.8 -63 48	78.784	220.9	0.56
78.784	220.9	0.56	2 6	+0.3 1	0.2 36
78.789	218.5	0.61	2 7	+0.2 1	0.3 36
78.786	219.7	0.58	2n	0.2	36-Inch
2460	A 457	03 18.2 -06 25	78.770	101.4	0.45
78.770	101.4	0.45	2 5	+0.1 1	0.1 36
78.773	107.3	0.39	2 7	+0.4 1	0.0 36
78.784	102.9	0.45	2 6	+0.1 1	0.2 36
78.776	103.9	0.43	3n	0.1	36-Inch
2459	AC 2	03 18.3 -00 56	77.108	250.2	1.20
77.108	250.2	1.20	2 6	0.0 3	2.2 26
77.119	252.9	1.28	2 5	0.0 3	2.6 26
77.133	249.4	1.15	2 8	+0.6 3	2.5 26
81.842	254.9	1.21	2 5	-0.1 4	1.8 26
85.080	254.1	1.30	2 7	-0.1 2	2.4 26
86.044	253.8	1.28	2 6	0.0 3	1.8 26
86.058	254.1	1.33	2 7	0.0 3	1.8 26
77.120	250.8	1.21	3n	2.4	26-Inch
84.756	254.2	1.28	4n	2.0	26-Inch
Valbousquet, 1981: +5.6, -0.02; +6.6, -0.01.					
78.792	299.5	0.24	2 7	+0.5 1	0.2 26
78.800	297.6	0.22	2 5	+0.4 1	0.1 26
78.796	298.6	0.23	2n	0.2	60-Inch
81.842	212.0	0.50	2 5	0.0 4	0.0 26
85.080	210.6	0.50	2 7	0.0 3	0.0 26
86.044	213.8	0.57	2 6	0.0 3	0.0 26
86.058	215.1	0.47	2 6	0.0 3	0.6 26
84.756	212.9	0.51	4n	0.2	26-Inch
Couteau, 1958: +9.7, +0.09.					
78.784	69.7	0.22	2 6	+0.4 1	0.1 36
78.787	69.7	0.27	2 4	+1.1 1	36
78.789	69.5	0.24	2 8	+0.2 1	0.2 36
78.787	69.6	0.24	3n	0.1	36-Inch
There has been a large change, poorly defined by the sparse measures.					
84.795	192.6	0.40	2 5	+0.1 4	0.4 36
84.798	192.1	0.41	2 5	0.0 4	0.6 36
84.801	191.0	0.40	2 4	+0.5 4	0.4 36
84.798	191.9	0.40	3n	0.5	36-Inch
Heintz, 1979: -0.5, -0.13.					
2452	HU 1056	03 19.6 +67 14	86.824	267.5	1.14
86.824	267.5	1.14	2 7	0.0 3	0.1 26
86.830	263.9	1.15	2 6	-0.3 3	0.0 26
87.095	265.4	1.21	2 5	0.0 3	0.1 26
87.098	265.9	1.18	2 7	0.0 3	0.0 26
86.962	265.7	1.17	4n	0.0	26-Inch
86.085	149.3	0.80	2 6	-0.2 3	0.1 26
86.824	149.2	0.88	2 7	-0.3 2	0.0 26
86.830	151.0	0.75	2 6	-0.1 3	0.0 26
86.493	149.8	0.81	3n	0.0	26-Inch
78.781	143.3	1.56	2 5	+0.6 1	0.1 36
78.787	144.6	1.51	2 5	+0.9 1	0.2 36
78.789	142.7	1.56	2 9	+1.0 1	0.1 36
78.786	143.5	1.54	3n	0.1	36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

33

	HU 1565			03 21.2 -53 26			2542	A 2345			03 27.5 +19 11		
84.795	99.8	1.66	2 4	0.0	4 0.0	36	78.932	162.3	1.09	2 6	0.0	3 0.4	26
84.798	101.0	1.74	2 5	-0.1	4 0.0	36	79.885	167.6	0.98	2 5	0.0	4 0.6	26
84.801	99.0	1.66	2 5	+0.4	4 0.0	36	80.095	162.8	0.97	4 6	0.0	3 0.4	26
84.798	99.9	1.69	3n	0.0	36-Inch		79.637	164.2	1.01	3n	0.5	26-Inch	
2492	HU 20			03 21.5 -11 13				COU 260			03 28.1 +20 28		
84.773	225.3	0.40	2 5	+0.3	3 60		86.830	29.5	0.19	2 6	-0.1	3 26	
84.784	225.2	0.30	2 4	+0.2	3 0.3	60	87.098	21.8	0.25	2 7	0.0	3 0.8	26
84.787	233.5	0.24	2 7	+0.3	3 0.2	60	87.103	13.6	0.28	2 5	-0.2	3 0.7	26
							87.114	21.4	0.27	2 7	0.0	3 0.6	26
84.781	228.0	0.31	3n	0.2	60-Inch		87.036	21.6	0.25	4n	0.7	26-Inch	
2491	STF 380			03 21.8 +08 46				STF 395			03 28.7 +29 04		
81.842	27.5	0.99	2 5	0.0	4 0.8	26	2554						
85.080	22.6	0.89	2 7	+0.2	3 0.5	26	77.108	93.9	1.83	2 5	0.0	3 1.2	26
86.044	20.4	0.84	2 6	-0.1	3 1.2	26	77.111	94.9	1.78	2 5	0.0	3 1.6	26
86.058	19.3	0.93	1 6	0.0	3 0.6	26	77.119	93.6	1.77	2 6	-0.1	3 1.6	26
84.756	22.4	0.91	4n	0.8	26-Inch		77.113	94.1	1.79	3n	1.5	26-Inch	
	RST 73			03 24.1 -57 27			2568	I 720 BC			03 28.9 -19 59		
78.789	218.6	0.87	2 7	+0.2	1 0.1	36	78.781	105.9	1.93	2 5	+0.5	2 0.7	36
78.789	218.2	0.87	1n	0.1	36-Inch		78.787	105.1	1.90	2 5	+0.9	1 0.7	36
							78.789	103.6	1.91	2 8	+0.9	1 0.7	36
	WOR 4			03 24.2 +23 47			78.785	104.9	1.91	3n	0.7	36-Inch	
78.932	351.9	2.05	2 7	0.0	3 1.2	26		B 50			03 29.9 -55 55		
79.885	351.5	2.16	2 6	0.0	4 1.2	26							
80.095	350.3	1.93	2 6	-0.1	3 1.2	26	84.773	190.0	0.72	2 5	+0.4	3 0.0	60
86.058	348.1	1.90	3 7	0.0	3 1.2	26	84.776	185.2	0.68	2 6	+0.3	3 0.2	60
86.085	348.0	2.41	1 6	-0.3	3 1.3	26	84.790	185.2	0.67	2 7	+0.1	3 0.2	60
86.824	348.3	2.09	2 7	-0.2	3 1.0	26							
79.637	351.2	2.05	3n	1.2	26-Inch		84.780	186.8	0.69	3n	0.1	60-Inch	
86.322	348.1	2.13	3n	1.2	26-Inch								
No measures since 1932. Retrograde motion.													
2532	HU 21			03 25.8 -13 04			2584	STF 403			03 31.2 +19 47		
84.773	40.0	1.45	2 5	0.0	3 1.2	60	86.830	173.4	2.45	1 5	-0.1	3 0.2	26
84.784	41.6	1.38	2 6	+0.5	3 1.2	60	87.095	173.8	2.29	1 5	+0.1	3 0.0	26
84.787	42.5	1.35	2 7	+0.3	3 2.5	60	87.098	174.7	2.38	1 6	-0.1	3 0.5	26
84.781	41.4	1.39	3n	1.6	60-Inch		87.008	174.0	2.37	3n	0.2	26-Inch	
	B 1449			03 26.0 -35 57			2588	A 1931			03 31.8 +07 49		
84.773	9.7	0.14	2 6	+0.4	3 60		78.113	53.4	0.78	2 6	0.0	3 0.8	26
84.776	11.4	0.12	2 6	+0.5	3 60		78.932	52.2	0.73	2 6	-0.2	3 1.2	26
84.779	10.7	0.14	2 5	+0.6	3 60		79.885	53.7	0.88	2 6	0.0	4 0.6	26
84.776	10.6	0.13	3n		60-Inch		80.104	51.2	0.83	2 6	-0.1	3 0.8	26
The motion is impossible to interpret due to the lack of measures.													
							79.258	52.6	0.80	4n	0.8	26-Inch	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

2614	HU 207	03 33.4 -13 01	2628	BU 533	03 35.6 +31 41
78.770	301.5	0.97 2 5 0.0 1 1.2 26	81.015	45.7	1.18 2 6 0.0 4 0.0 26
78.773	302.7	0.69 2 6 +0.2 1 1.0 26	81.081	45.6	1.14 2 3 0.0 3 0.2 26
78.781	298.1	0.64 2 5 +0.6 1 1.2 26	81.095	43.5	1.15 2 5 +0.1 3 0.3 26
78.775	300.8	0.77 3n 1.1 36-Inch	81.064	44.9	1.16 3n 0.2 26-Inch
2613	A 1932	03 33.6 +07 04		COU 1862	03 36.4 +45 19
78.113	268.7	0.18 2 7 +0.1 3 0.2 26	86.824	21.9	0.24 2 7 -0.1 3 0.8 26
78.932	262.2	0.22 2 6 0.0 3 0.0 26	87.098	22.3	0.35 2 6 0.0 3 0.8 26
79.885	277.2	0.25 2 6 +0.1 4 26	87.103	13.4	0.35 2 5 -0.1 3 0.2 26
78.977	269.4	0.22 3n 0.1 26-Inch	87.114	7.5	0.30 2 7 0.0 3 0.7 26
	B 52	03 33.9 -31 05	87.035	16.3	0.31 4n 0.6 26-Inch
78.800	150.3	0.09 2 5 +0.3 1 60	2636	STF 420	03 36.5 +23 55
84.776	320.6	0.24 2 6 +0.1 3 0.0 60	86.830	112.0	6.83 2 5 -0.2 3 0.8 26
84.784	321.8	0.25 2 5 +0.6 3 0.6 60	87.095	111.6	6.76 2 5 0.0 3 2.5 26
84.787	322.6	0.23 2 7 +0.4 3 0.6 60	87.098	112.7	6.73 2 6 +0.1 3 1.0 26
78.800	150.3	0.09 1n 60-Inch	87.008	112.1	6.77 3n 1.4 26-Inch
84.782	321.7	0.24 3n 0.5 60-Inch			
Finsen, 1963: +2.7, -0.01; +2.5, -0.02.			2640	A 2418	03 36.5 +01 53
2616	STF 412	03 34.4 +24 28	74.986	257.4	0.82 2 7 -0.1 3 0.1 26
78.064	6.8	0.57 2 6 -0.2 3 0.0 26	76.703	257.1	0.92 2 7 +0.1 4 0.2 26
78.083	4.6	0.57 2 6 -0.1 3 0.2 26	77.106	259.4	0.90 2 5 0.0 3 0.0 26
78.097	7.4	0.54 2 7 -0.1 4 0.3 26	77.108	254.8	0.82 2 7 -0.1 3 0.2 26
78.108	6.2	0.46 1 7 -0.2 3 0.3 26	76.476	257.2	0.86 4n 0.1 26-Inch
81.842	5.1	0.51 2 5 0.0 4 0.3 26			
85.080	2.6	0.65 2 7 +0.1 3 0.2 26	2654	HU 22	03 37.9 -11 32
86.044	2.5	0.64 1 7 -0.1 3 0.0 26	84.795	108.4	0.44 2 4 0.0 4 0.5 36
86.058	3.5	0.69 3 7 0.0 3 0.1 26	84.798	111.0	0.53 2 5 -0.1 4 0.8 36
78.088	6.2	0.54 4n 0.2 26-Inch	84.801	111.1	0.56 2 4 +0.3 4 0.8 36
84.756	3.4	0.62 4n 0.2 26-Inch	84.798	110.2	0.51 3n 0.7 36-Inch
Scardia, 1985: 0.0, -0.04; +0.9, +0.02.					
2612	STF 400	03 35.0 +60 02		HEI 30	03 38.0 +16 29
86.824	261.6	1.22 2 7 -0.2 3 0.7 26	86.058	13.5	0.79 2 7 0.0 3 0.2 26
86.830	262.9	1.41 2 6 -0.5 3 1.0 26	86.063	19.2	0.92 2 6 0.0 3 0.2 26
87.098	264.1	1.29 2 6 0.0 3 0.6 26	86.085	20.4	0.67 2 6 -0.5 3 0.3 26
87.103	262.3	1.35 2 5 -0.2 3 0.6 26	86.069	17.7	0.79 3n 0.2 26-Inch
86.964	262.7	1.32 4n 0.7 26-Inch			
Baize, 1952: +2.7, -0.07.			2667	HU 1064	03 39.6 +16 11
2631	A 1933	03 35.5 +06 25	77.108	159.5	0.26 1 7 -0.1 3 0.0 26
78.064	135.4	1.17 2 6 -0.1 3 0.6 26	77.133	156.7	0.29 3 8 +0.3 3 0.1 26
78.083	137.7	1.25 1 5 -0.1 3 0.8 26	78.064	151.0	0.27 2 6 0.0 3 0.0 26
78.097	135.9	1.14 2 7 -0.1 4 1.3 26	77.435	155.7	0.27 3n 0.0 26-Inch
78.081	136.3	1.19 3n 0.9 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

2776	BU 1184		03 48.3 +22 23	2789	A 832		03 49.1 +11 39
77.106	272.8	0.48	2 5 0.0 3 0.2 26	77.106	112.1	1.85	2 6 +0.1 3 0.8 26
77.108	272.1	0.48	2 7 +0.1 3 0.3 26	77.108	113.3	1.82	2 7 +0.2 3 0.2 26
77.111	273.9	0.40	2 5 0.0 3 26	77.111	111.8	1.79	2 5 +0.1 3 0.3 26
77.119	276.2	0.46	2 4 -0.3 3 0.3 26	77.133	111.4	1.75	2 8 +0.4 3 0.3 26
77.111	273.8	0.46	4n 0.3 26-Inch	77.114	112.2	1.80	4n 0.4 26-Inch
2768	HU 546		03 48.4 +52 03	2799	STT 65		03 50.3 +25 35
79.885	167.5	0.24	2 6 0.0 4 0.3 26	76.119	207.5	0.62	1 4 0.0 3 0.4 26
80.095	160.3	0.27	2 5 -0.1 3 26	76.133	202.1	0.68	1 7 +0.5 3 0.6 26
80.104	158.8	0.24	2 5 -0.2 3 26	76.147	205.3	0.60	1 3 +0.6 3 0.5 26
80.028	162.2	0.25	3n 0.3 26-Inch	77.946	208.3	0.67	1 6 +0.3 3 0.3 26
Heintz, 1965: -3.4, +0.01.				81.015	208.7	0.56	2 6 -0.1 4 0.4 26
2782	BU 1105		03 48.6 +24 10	81.095	209.6	0.75	2 7 +0.1 3 0.2 26
78.108	235.7	0.24	2 6 0.0 3 1.0 26	81.100	208.5	0.59	2 8 +0.2 3 0.3 26
78.113	236.3	0.18	2 6 +0.1 3 0.8 26	85.080	205.6	0.47	2 8 0.0 3 0.0 26
78.127	233.4	0.20	2 6 +0.3 3 0.8 26	85.140	207.8	0.45	2 7 +0.1 3 0.3 26
78.116	235.1	0.21	3n 0.9 26-Inch	86.044	209.5	0.49	2 6 -0.3 3 0.2 26
2765	STT 62		03 48.9 +64 45	86.058	206.7	0.45	2 7 0.0 3 0.5 26
78.932	301.0	0.30	2 6 0.0 3 0.2 26	76.586	205.8	0.64	4n 0.4 26-Inch
79.885	303.3	0.28	2 5 0.0 4 0.2 26	81.070	208.9	0.63	3n 0.3 26-Inch
80.095	304.4	0.31	2 5 -0.3 3 0.2 26	85.580	207.4	0.46	4n 0.3 26-Inch
79.637	302.9	0.30	3n 0.2 26-Inch	Wierzbinski, 1957: -0.6, -0.02; +1.0, +0.02; -2.0, -0.04.			
Heintz, 1973: -1.2, -0.01.				2800	ES 1137		03 51.1 +49 40
2785	A 831		03 48.9 +11 42	81.015	109.0	0.69	2 6 0.0 4 0.0 26
77.106	6.0	0.42	1 5 0.0 3 1.2 26	81.800	113.6	0.55	2 7 -0.3 3 0.3 26
77.108	8.3	0.42	4 6 +0.1 3 1.8 26	81.842	123.9	0.51	2 5 -0.2 4 0.2 26
77.133	6.8	0.41	1 7 +0.3 3 1.2 26	81.319	115.5	0.58	3n 0.2 26-Inch
77.116	7.0	0.42	3n 1.4 26-Inch	Closing in.			
2787	HO 324		03 49.0 +14 58	KUI 15			03 51.9 +06 33
77.106	333.0	1.13	2 6 +0.1 3 0.3 26	85.138	208.1	0.61	2 5 +0.3 3 0.4 26
77.108	334.1	1.03	1 7 +0.2 3 0.1 26	85.140	209.5	0.63	4 8 +0.2 3 0.4 26
77.111	334.6	1.02	2 5 -0.1 3 0.2 26	86.044	209.9	0.68	2 6 0.0 3 0.0 26
77.119	332.4	0.97	2 4 -0.2 3 0.2 26	86.063	207.2	0.61	2 6 0.0 3 0.4 26
77.111	333.5	1.04	4n 0.2 26-Inch	85.596	208.6	0.64	4n 0.3 26-Inch
2790	A 1829		03 49.0 +06 48	2823	OL 1		03 51.9 -13 45
77.106	313.1	1.76	2 5 +0.2 3 1.5 26	78.770	280.5	3.24	2 5 0.0 1 0.3 36
77.108	304.7	1.80	2 7 +0.3 3 1.4 26	78.773	280.9	3.21	2 7 +0.3 1 0.2 36
77.111	308.9	1.62	2 4 +0.5 3 1.5 26	78.781	278.7	3.16	2 5 +0.4 1 0.3 36
77.133	311.1	1.64	2 7 +0.4 3 1.4 26	78.775	280.0	3.20	3n 0.3 36-Inch
77.114	309.4	1.70	4n 1.4 26-Inch	2828	A 1293		03 53.7 +53 17
				81.015	258.1	0.33	2 6 0.0 4 0.2 26
				81.100	251.4	0.41	2 7 -0.3 3 0.6 26
				81.842	251.2	0.33	2 5 -0.2 4 0.4 26
				81.319	253.6	0.36	3n 0.4 26-Inch
				Ling, 1987: +1.6, -0.04.			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

37

2856	A 461	03 54.4 -06 49	2890	J 306	03 57.9 +21 58
84.790	226.0 0.17	2 7 0.0 3 0.0 60	86.830	87.8 2.52	2 5 0.0 3 0.2 26
84.790	226.0 0.17	1n 0.0 60-Inch	87.095	87.2 2.37	2 5 -0.2 3 26
			87.098	89.5 2.14	2 7 0.0 3 0.0 26
	RST 3389	03 55.0 -10 58	87.008	88.2 2.34	3n 0.1 26-Inch
78.770	103.7 0.55	2 5 +0.2 1 0.2 36			
78.773	109.4 0.45	2 6 +0.4 1 0.2 36	2902	HU 25	03 58.4 +12 07
78.784	100.5 0.42	2 7 +0.1 1 0.2 36	78.064	341.2 0.63	1 6 0.0 3 0.4 26
78.789	102.9 0.52	2 7 +0.2 1 0.5 36	78.083	342.9 0.71	1 5 0.0 3 0.4 26
			78.097	340.0 0.63	1 6 0.0 4 0.7 26
78.779	104.1 0.48	4n 0.3 36-Inch	87.103	345.7 0.73	2 5 -0.2 3 0.4 26
			87.112	342.3 0.75	2 5 0.0 3 26
	RST 3390	03 55.0 -14 02	87.114	342.0 0.79	2 7 0.0 3 0.4 26
84.790	151.6 0.73	2 7 0.0 3 0.2 60	78.081	341.4 0.66	3n 0.5 26-Inch
84.790	151.6 0.73	1n 0.2 60-Inch	87.110	343.3 0.76	3n 0.4 26-Inch
2864	BU 85	03 55.4 +17 38	2911	HU 27	03 59.0 +09 47
86.830	216.3 3.97	2 5 0.0 3 2.0 26	86.058	298.1 0.25	2 7 0.0 3 0.2 26
87.095	217.0 3.81	2 5 0.0 3 3.5 26	86.063	293.3 0.29	2 7 0.0 3 26
87.098	217.4 4.02	2 7 0.0 3 1.8 26	86.085	294.7 0.28	2 6 -0.5 3 0.0 26
87.008	216.9 3.93	3n 2.4 26-Inch	86.069	295.4 0.27	3n 0.1 26-Inch
2873	BU 263	03 56.5 +33 11	2922	B 61	03 59.5 -28 47
78.064	98.2 0.71	2 6 -0.1 3 0.3 26	84.773	204.6 0.43	2 6 +0.2 3 60
78.083	97.6 0.65	2 5 -0.2 3 0.2 26	84.776	199.4 0.31	2 6 0.0 3 0.2 60
78.097	95.8 0.70	2 7 0.0 4 0.2 26	84.787	202.6 0.33	2 7 +0.2 3 0.2 60
78.081	97.2 0.69	3n 0.2 26-Inch	84.779	202.2 0.36	3n 0.2 60-Inch
2885	A 463	03 56.5 -06 24	2921	HU 29	03 59.8 -10 19
84.790	339.0 0.11	2 7 +0.1 3 0.0 60	78.792	306.4 0.37	2 7 +0.2 1 0.1 60
84.790	339.0 0.11	1n 0.0 60-Inch	78.800	308.4 0.33	2 6 0.0 1 0.3 60
			78.796	307.4 0.35	2n 0.2 60-Inch
	Substantial orbital motion, but the lack of any measures since 1961 makes interpretation impossible.				
2889	HU 24	03 57.6 +11 30	2928	A 1937	04 00.8 +05 05
78.064	270.1 1.37	2 6 0.0 3 1.0 26	78.800	180.0 0.11	1 6 +0.3 1 60
78.083	269.2 1.42	2 5 +0.1 3 1.6 26	78.800	180.0 0.11	1n 60-Inch
78.097	269.5 1.45	4 6 0.0 4 2.4 26		Newburg, 1968: -6.3, +0.03.	
78.081	269.6 1.41	3n 1.7 26-Inch			
	HEI 32	03 57.8 +15 15	2941	AG 77	04 02.0 +23 21
86.058	335.1 1.34	2 7 0.0 3 0.2 26	77.106	352.9 1.60	1 5 +0.2 3 0.5 26
86.063	335.0 1.53	2 6 0.0 3 0.1 26	77.108	350.4 1.62	1 7 +0.2 3 0.3 26
86.085	332.5 1.34	2 6 -0.5 3 0.3 26	77.119	352.5 1.67	1 5 0.0 3 0.5 26
86.069	334.2 1.40	3n 0.2 26-Inch	77.111	351.9 1.63	3n 0.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

2952	DAW 79		04 02.4 -28 31				2980	A 1710			04 06.5 +43 25			
78.770	51.5	0.46	2 5	+0.6	1 0.3	36	79.885	334.2	0.41	2 5	0.0	4 0.2	26	
78.773	51.5	0.39	2 7	+0.6	1 0.2	36	80.095	331.3	0.46	2 5	-0.2	3 0.0	26	
78.784	51.4	0.33	2 7	+0.5	1 0.3	36	80.104	335.4	0.45	2 5	-0.2	3 0.3	26	
84.773	36.0	0.42	2 5	+0.3	3 0.4	60	86.058	328.0	0.48	2 7	0.0	3 0.0	26	
84.776	31.6	0.30	2 6	+0.1	3 0.4	60	86.063	330.0	0.54	2 6	-0.1	3 0.0	26	
84.787	34.6	0.28	2 8	+0.2	3 0.2	60	86.085	328.1	0.50	2 7	-0.5	3 0.2	26	
78.776	51.5	0.39	3n	0.3	36-Inch		80.028	333.6	0.44	3n	0.2	26-Inch		
84.779	34.1	0.33	3n	0.3	60-Inch		86.069	328.7	0.51	3n	0.1	26-Inch		
Closing in.							Heintz, 1982: +0.9, -0.01; +1.6, 0.00.							
2937	HU 210		04 02.7 +52 09				2996	A 2615			04 06.7 -04 22			
78.932	39.7	0.23	2 6	-0.1	3	26	78.064	251.8	0.89	4 5	+0.1	3 0.7	26	
81.100	39.7	0.25	2 7	-0.1	3 0.7	26	78.083	251.5	0.83	2 5	0.0	3 1.7	26	
85.080	35.1	0.24	2 8	-0.1	3 0.0	26	78.097	256.6	0.82	2 5	0.0	3 1	26	
							78.108	252.8	0.76	2 5	-0.1	2	26	
81.704	38.2	0.24	3n	0.4	26-Inch		78.088	253.2	0.82	4n	1.0	26-Inch		
If there was, indeed, a quadrant reversal in the unobserved years 1922-1971, then there has been a large change.							3005	HWE 9			04 07.0 -28 49			
							84.784	175.5	1.52	2 5	+0.2	3 0.0	60	
							84.787	175.0	1.37	2 8	+0.2	3 0.0	60	
							84.790	175.3	1.36	2 7	+0.2	3 0.0	60	
2950	A 1709		04 03.6 +42 11				84.787	175.3	1.42	3n	0.0	60-Inch		
80.104	227.2	0.95	2 5	-0.3	3 1.4	26								
80.117	219.1	1.28	3 5	-0.2	3 1.8	26								
80.120	223.3	1.06	2 6	-0.1	3 2.2	26								
80.114	223.2	1.10	3n	1.8	26-Inch									
2959	STF 483		04 04.1 +39 31				2995	STT 531			04 07.5 +38 05			
79.885	84.0	1.06	2 5	0.0	4 1.4	26	79.885	11.6	1.56	2 5	+0.1	4 1.8	26	
80.095	78.2	0.93	2 6	-0.1	3 1.4	26	80.095	9.0	1.56	2 6	0.0	3 2.2	26	
80.104	79.2	0.94	2 5	-0.1	3 1.6	26	80.104	10.5	1.60	2 5	-0.1	3 2.4	26	
80.117	80.8	1.17	2 5	+0.1	3 1.8	26	86.058	5.3	1.83	2 7	+0.1	3 2.2	26	
86.058	73.2	1.02	2 6	0.0	3 1.5	26	86.063	6.0	1.77	2 6	+0.1	3 1.6	26	
86.063	77.6	1.06	2 7	0.0	3 1.4	26	86.085	4.0	1.93	2 7	-0.5	3 2.0	26	
86.069	79.3	1.24	2 6	-0.5	3 1.6	26	80.028	10.4	1.57	3n	2.1	26-Inch		
87.098	72.4	1.04	2 8	0.0	3 1.4	26	86.069	5.1	1.84	3n	1.9	26-Inch		
80.050	80.6	1.02	4n	1.6	26-Inch		Costa, Docobo, 1985: -0.7, +0.05; -0.9, +0.19.							
86.322	75.6	1.09	4n	1.5	26-Inch		3004	A 468			04 07.5 -06 57			
Couteau, 1958: +3.8, +0.12; +6.5, +0.09.							78.770	198.9	0.81	1 5	+0.2	1 1.0	36	
							78.773	197.0	0.74	1 7	+0.3	1 0.8	36	
							78.784	199.7	0.76	1 7	0.0	1 1.2	36	
							78.776	198.5	0.77	3n	1.0	36-Inch		
2988	A 1295		04 06.1 -01 23				3016	HU 607			04 08.9 +34 05			
78.064	154.6	0.80	1 5	0.0	3 0.8	26	87.112	327.6	4.17	2 4	-0.1	3 3.0	26	
78.083	152.0	0.68	2 5	-0.1	3 0.6	26	87.114	328.9	4.61	2 7	0.0	3 2.8	26	
78.097	151.4	0.73	1 6	0.0	4 1.5	26								
78.081	152.7	0.74	3n	1.0	26-Inch		87.113	328.2	4.39	2n	2.9	26-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

39

3026	HU 301	04 09.1 +10 46	2963	STF 460	04 10.1 +80 41
81.100	284.3	0.61 2 8 0.0 3 1.4 26	81.842	116.9	0.75 2 4 -0.2 4 0.8 26
86.044	281.2	0.73 2 5 -0.2 3 1.4 26	85.080	117.4	0.78 2 7 0.0 3 0.8 26
86.058	286.6	0.50 2 5 +0.1 3 1.5 26	85.138	122.1	0.84 2 5 +0.3 3 1.0 26
86.085	282.5	0.61 2 7 -0.4 3 1.8 26	84.020	118.8	0.79 3n 0.9 26-Inch
84.822	283.6	0.61 4n 1.5 26-Inch	Baize, 1958: +3.1, +0.05.		
3015	STF 3114	04 09.2 +40 10	3028	A 833	04 10.7 +60 22
77.119	162.2	2.77 1 4 0.0 3 2.5 26	80.120	0.5	2.69 2 6 0.0 3 2.5 26
77.946	162.5	2 5 +0.1 3 2.6 26	81.015	357.6	2.57 2 6 +0.1 4 3.5 26
78.064	161.2	2.86 2 7 +0.1 3 2.6 26	81.095	3.0	2.62 1 6 0.0 3 2.8 26
78.083	161.5	2.82 2 6 0.0 3 2.4 26	80.743	0.4	2.63 3n 2.9 26-Inch
77.803	161.8	2.82 3n 2.5 26-Inch	3041	A 2801	04 10.8 -04 52
3021	HO 326	04 09.2 +28 39	78.792	5.9	0.16 1 7 0.0 1 0.0 60
81.100	266.5	0.36 2 8 0.0 3 0.0 26	78.800	4.8	0.17 1 6 0.0 1 0.0 60
81.842	268.6	0.35 2 5 -0.2 4 3 26	84.787	20.4	0.14 2 8 +0.3 3 0.2 60
85.080	262.6	0.34 2 7 +0.1 3 0.0 26	84.790	23.2	0.15 2 6 0.0 3 0.1 60
85.138	268.9	0.39 2 5 0.0 3 0.0 26	78.796	5.4	0.16 2n 0.0 60-Inch
83.290	266.6	0.36 4n 0.1 26-Inch	84.788	21.8	0.14 2n 0.2 60-Inch
Costa, Morales, 1975: -5.7, -0.02.			Muller, 1954: -2.7, -0.05; - 4.6, -0.01.		
3032	A 469	04 09.3 -07 56	Zulevic, 1972: -2.5, -0.03; -11.6, +0.01.		
78.784	273.5	0.16 2 7 +0.1 1 0.0 36	Baize, 1985: -0.5, -0.03; - 6.4, 0.00.		
78.789	273.7	0.17 2 7 0.0 1 0.0 36	3038	BU 546	04 11.5 +41 52
84.795	292.8	0.15 2 7 +0.2 4 0.0 36	81.842	43.4	0.92 2 5 -0.2 4 0.0 26
84.798	290.3	0.16 2 5 -0.3 4 0.2 36	85.080	45.6	0.99 2 8 0.0 3 0.0 26
84.801	288.9	0.18 2 5 0.0 4 0.0 36	85.140	45.7	0.90 2 8 0.0 3 0.0 26
78.786	273.6	0.16 2n 0.0 36-Inch	84.021	44.9	0.94 3n 0.0 26-Inch
84.798	290.7	0.16 3n 0.0 36-Inch	3014	A 1296	04 09.6 +52 35
Baize, 1981: -0.2, +0.03; +2.5, +0.01.			78.932	86.3	1.03 2 7 0.0 3 1.8 26
3014	A 1296	04 09.6 +52 35	80.095	85.0	0.38 2 6 0.0 3 1.3 26
80.120	283.8	0.40 2 6 0.0 3 1.2 26	80.104	88.0	0.95 2 5 +0.1 3 1.8 26
81.015	278.9	0.47 2 6 0.0 4 0.8 26	79.710	86.4	0.95 3n 1.6 26-Inch
81.100	275.4	0.46 2 7 -0.2 3 1.0 26	3069	HWE 10	04 13.0 -28 33
80.745	279.4	0.44 3n 1.0 26-Inch	78.792	47.9	1.83 2 6 +0.1 1 0.2 60
3034	A 2914	04 09.6 -16 53	78.800	48.1	1.84 2 6 +0.2 1 0.2 60
78.770	193.7	1.69 1 5 +0.2 1 0.1 36	78.796	48.0	1.84 2n 0.2 60-Inch
78.773	194.8	1.61 2 7 +0.3 1 0.0 36	3062	A 1711	04 13.9 +42 35
78.781	195.3	1.53 2 4 +0.3 1 0.2 36	81.842	98.7	0.56 2 4 -0.1 4 1.2 26
78.775	194.6	1.61 3n 0.1 36-Inch	85.080	91.8	0.61 2 7 0.0 3 1.0 26
FIN 86 04 09.9 -52 50			85.140	93.3	0.57 2 8 +0.1 3 1.0 26
78.792	17.7	0.26 1 5 +0.2 1 0.1 60	84.021	94.5	0.58 3n 1.1 26-Inch
78.800	20.7	0.21 1 6 +0.3 1 0.2 60	Substantial decrease in separation.		
78.796	19.2	0.24 2n 0.2 60-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

3072	BU 547	04 13.9 +09 16	3102	HO 328	04 17.0 +19 41
86.830	346.1	1.78 1 4 0.0 3 2.0 26	77.106	19.4	0.25 1 6 +0.1 3 0.0 26
87.095	344.1	1.37 2 5 0.0 3 2.5 26	77.108	18.1	0.23 3 7 0.0 4 0.4 26
87.098	350.1	1.24 1 7 -0.1 3 1.8 26	77.133	16.0	0.19 1 8 +0.2 4 0.5 26
87.103	348.8	1.44 4 5 -0.3 3 2.5 26	78.108	24.1	0.27 2 6 0.0 3 0.3 26
87.032	347.3	1.46 4n 2.2 26-Inch	78.113	17.6	0.24 2 6 -0.1 3 0.6 26
			78.127	17.1	0.25 2 6 0.0 3 0.8 26
	BRT 2853	04 13.9 -25 00	77.116	17.8	0.22 3n 0.3 26-Inch
84.790	172.0	2.97 2 7 +0.2 3 0.2 60	78.116	19.6	0.25 3n 0.6 25-Inch
84.790	172.0	2.97 1n 0.2 60-Inch	Heintz, 1978: -3.8, 0.00; 0.0, +0.01.		
3076	A 2617	04 14.1 -12 09	3107	J 894	04 17.3 +24 54
78.770	327.9	2.04 1 5 +0.2 1 1.5 36	87.112	15.2	3.02 2 4 -0.1 3 26
78.784	327.8	1.98 2 8 0.0 1 1.4 36	87.114	13.6	2.95 1 7 0.0 3 0.0 26
78.787	328.5	1.93 2 5 +0.4 1 1.4 36	87.113	14.4	2.98 2n 0.0 26-Inch
78.780	328.1	1.98 3n 1.4 36-Inch	3108	A 2350	04 17.5 +19 12
	RST 2338	04 14.1 -46 08	78.113	133.2	0.53 2 6 +0.1 3 1.8 26
78.792	150.4	0.24 2 6 +0.3 1 0.4 60	78.127	136.9	0.55 3 5 0.0 3 1.8 26
78.800	155.2	0.21 2 5 +0.3 1 0.5 60	78.149	135.9	0.45 2 6 +0.3 3 2.0 26
78.796	152.8	0.22 2n 0.4 60-Inch	78.130	135.3	0.51 3n 1.9 26-Inch
3082	STT 77	04 15.9 +31 42	3098	STF 511	04 17.9 +58 47
78.932	272.6	0.67 2 6 -0.1 3 0.1 26	80.095	108.0	0.40 2 5 0.0 3 0.3 26
79.885	273.7	0.70 2 5 0.0 4 0.2 26	80.104	112.2	0.46 2 5 -0.2 3 0.4 26
80.057	273.5	0.67 2 3 -0.2 3 26	80.117	112.8	0.41 2 5 -0.6 3 0.4 26
80.095	271.2	0.71 2 6 0.0 3 0.1 26	80.120	109.0	0.46 2 6 -0.5 3 0.4 26
86.830	276.2	0.68 2 4 0.0 3 26	80.109	110.5	0.43 4n 0.4 26-Inch
87.095	277.0	0.63 2 5 -0.1 3 0.2 26	Heintz, 1969: +4.1, +0.03.		
87.098	276.7	0.68 2 7 0.0 3 0.0 26	3114	STF 520	04 18.3 +22 49
87.103	277.9	0.68 2 5 -0.3 3 0.3 26	76.703	198.8	0.17 2 7 0.0 4 0.0 26
79.742	272.8	0.69 4n 0.1 26-Inch	76.966	204.1	0.14 2 6 -0.2 4 0.0 26
87.032	277.0	0.67 4n 0.2 26-Inch	77.106	220.9	0.19 2 6 +0.2 3 0.0 26
Scardia, 1983: +0.5, -0.05; +0.4, -0.05.			77.108	212.6	0.15 3 7 +0.1 4 0.0 26
Starikova, 1983: +0.6, -0.04; +0.3, -0.03.			80.104	216.4	0.24 2 5 0.0 3 0.0 26
	GLE 1	04 16.3 -60 57	80.120	216.3	0.20 2 5 -0.1 3 0.0 26
84.773	101.9	0.33 2 5 +0.2 3 1.0 60	81.015	226.5	0.22 2 6 0.0 4 0.0 26
84.776	101.4	0.28 2 6 +0.1 3 0.5 60	81.095	229.3	0.22 2 6 0.0 3 0.0 26
84.784	105.0	0.32 2 4 +0.2 3 0.4 60	86.058	237.6	0.33 2 6 0.0 3 0.0 26
84.778	102.8	0.31 3n 0.6 60-Inch	86.063	237.3	0.34 2 6 0.0 3 0.0 26
Rapid direct motion.			86.085	236.0	0.31 2 7 -0.3 3 0.0 26
Erceg, 1984: +2.1, -0.09.			87.098	237.3	0.33 2 7 0.0 3 0.0 26
			76.971	209.1	0.16 4n 0.0 26-Inch
			80.584	222.1	0.22 4n 0.0 26-Inch
			86.326	237.1	0.33 4n 0.0 26-Inch
			Heintz, 1982: +6.3, +0.02; -2.7, +0.01; -4.1, +0.02.		

41

3125	B 687		04 18.6 -19 23		3174	STF 535		04 23.3 +11 23
84.787	261.1	0.26	2 5 +0.3 3 0.3 60		76.728	298.4	1.25	2 4 +0.1 4 1.4 26
84.790	259.6	0.24	2 7 +0.2 3 0.3 60		76.966	296.8	1.33	2 5 -0.1 3 1.0 26
					77.106	295.7	1.24	2 6 +0.2 3 0.8 26
84.788	260.4	0.25	2n 0.3 60-Inch		77.119	296.0	1.16	2 4 0.0 3 0.8 26
					86.830	289.8	1.25	2 5 -0.1 3 0.8 26
3116	A 1939		04 18.7 +04 45		87.095	289.3	1.21	2 5 -0.1 3 0.6 26
					87.098	291.5	1.23	2 8 0.0 3 0.7 26
81.100	288.4	0.73	2 8 0.0 3 1.6 26		87.103	290.0	1.23	2 5 -0.3 3 0.8 26
81.100	288.4	0.73	1n 1.6 26-Inch		76.980	296.7	1.24	4n 1.0 26-Inch
					87.032	290.2	1.23	4n 0.7 26-Inch
3135	STT 79		04 19.9 +16 32					Popovic, 1982: +2.3, +0.09; +3.1, +0.15.
78.083	78.8	0.36	2 6 -0.1 3 1.8 26		3172	STT 80		04 23.6 +42 26
78.097	81.8	0.28	2 7 -0.1 3 1.5 26					
78.108	79.1	0.37	2 6 0.0 3 1.6 26		79.885	162.8	0.32	2 7 0.0 4 0 6 26
78.113	81.5	0.34	2 7 -0.1 3 1.4 26		80.095	159.1	0.43	2 5 0.0 3 0.4 26
81.100	94.6	0.28	2 8 0.0 3 1.3 26		80.104	162.4	0.44	2 5 -0.2 3 0.3 26
					86.058	156.1	0.33	2 7 0.0 3 0.4 26
78.100	80.3	0.34	4n 1.6 26-Inch		86.063	157.6	0.36	2 7 0.0 3 0.4 26
81.100	94.6	0.28	1n 1.3 26-Inch		86.085	161.1	0.36	2 7 -0.3 3 0.4 26
					80.028	161.4	0.40	3n 0.4 26-Inch
Docobo, Costa, 1985: +1.0, -0.10; +1.5, -0.03.					86.069	158.3	0.35	3n 0.4 26-Inch
3159	BU 744		04 21.5 -25 44		3182	HU 304		04 23.9 +09 28
84.795	322.5	0.63	2 8 +0.2 4 0.3 36		77.946	63.1	0.28	2 6 0.0 3 0.0 26
84.798	323.1	0.50	2 5 -0.3 4 0.2 36		78.083	56.6	0.27	2 6 -0.1 3 0.2 26
84.801	324.5	0.52	2 5 0.0 4 0.2 36		78.097	62.6	0.23	2 7 0.0 3 0.2 26
					78.108	59.1	0.28	2 5 0.0 3 0.0 26
84.798	323.4	0.55	3n 0.2 36-Inch		81.842	67.7	0.24	2 5 -0.2 4 0.0 26
					85.080	77.6	0.20	2 7 +0.2 3 26
van den Bos, 1951: -9.7, 0.00.					85.138	82.9	0.20	2 6 +0.2 3 26
					85.140	75.4	0.15	2 8 0.0 4 0.0 26
3147	STF 522		04 22.5 +51 36		78.059	60.4	0.26	4n 0.1 26-Inch
					84.300	75.9	0.20	4n 0.0 26-Inch
77.111	33.1	1.34	2 5 -0.2 3 0.1 26					
77.119	33.3	1.40	2 4 -0.2 3 0.1 26					
77.946	32.6	1.21	2 5 0.0 3 0.0 26					van den Bos, 1951: +4.5, -0.02; +3.6, -0.01.
78.097	32.8	1.52	2 7 -0.1 3 0.0 26					Starikova, 1985: +4.9, -0.02; +2.8, 0.00.
77.568	33.0	1.37	4n 0.0 26-Inch					
3169	STT 82		04 22.8 +15 03		3191	BU 1235		04 24.5 +22 45

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

SLR 6						04 25.5 -53 06						3228						BU 1186						04 27.5 +11 12					
84.773	103.0	0.97	2 5	+0.2 3	1.3 60	78.083	124.8	0.20	2 5	0.0 3	2.0 26	78.113	130.5	0.21	3 6	-0.1 3	2.2 26	78.127	127.5	0.21	1 5	-0.1 3	1.8 26	78.149	136.4	0.26	2 6	0.0 3	2.2 26
84.784	102.2	0.95	2 3	+0.3 3	60	78.118	129.8	0.22	4n	2.0	26-Inch																		
84.790	100.0	0.86	2 5	+0.4 3	1.2 60																								
84.782	101.7	0.93	3n	1.2	60-Inch																								
3214	BU 403					04 25.6 -02 13					3241	I 413					04 27.5 -24 28												
78.932	92.8	1.17	2 7	-0.2 3	1.0 26	78.784	281.9	0.32	2 7	+0.4 1	0.3 36																		
80.120	92.3	1.34	2 5	-0.1 3	1.8 26	78.789	288.1	0.33	2 7	+0.4 1	0.3 36																		
81.095	93.6	1.32	2 5	0.0 3	1.8 26	78.786	285.0	0.32	2n	0.3	36-Inch																		
80.049	92.9	1.28	3n	1.5	26-Inch																								
3210	BU 1185					04 25.8 +18 52					3247	BU 184					04 27.9 -21 31												
75.884	23.8	0.25	1 8	-0.1 3	0.6 26	78.770	251.3	1.77	2 6	+0.4 1	0.2 36																		
77.108	21.3	0.22	1 7	+0.1 4	0.6 26	78.773	253.3	1.66	2 7	+0.3 1	0.3 36																		
77.133	21.8	0.25	3 8	0.0 4	0.8 26	78.781	251.9	1.73	2 4	+0.1 1	0.2 36																		
76.708	22.3	0.24	3n	0.7	26-Inch	78.775	252.2	1.72	3n	0.2	36-Inch																		
Heintz, 1969: - 1.1, 0.00.																													
Tokovinen, 1986: +10.6, +0.06.																													
3221	HU 1369					04 25.8 -28 45					3248	HU 1080					04 29.0 +16 09												
84.795	307.2	0.28	2 8	+0.2 4	0.2 36	77.108	268.0	0.23	2 7	+0.1 4	0.5 26																		
84.798	307.2	0.28	2 6	-0.2 4	0.0 36	77.133	268.2	0.22	2 8	+0.1 4	0.5 26																		
84.801	309.0	0.30	2 4	+0.3 4	36	77.169	264.3	0.22	2 8	+0.6 3	0.6 26																		
84.798	307.8	0.29	3n	0.0	36-Inch	77.137	266.8	0.22	3n	0.5	26-Inch																		
WOR 15						04 26.8 +12 40					van den Bos, 1956: +2.8, -0.01.																		
78.083	348.3	0.46	1 6	-0.1 3	0.0 26	3264	STF 554					04 30.1 +15 38																	
78.097	345.1	0.40	1 7	0.0 3	0.0 26	86.830	17.3	1.59	4 5	-0.1 3	1.3 26																		
78.108	346.2	0.46	1 6	0.0 3	0.3 26	87.095	15.6	1.57	2 5	-0.1 3	2.0 26																		
78.113	345.6	0.57	1 7	-0.1 3	0.3 26	87.098	16.5	1.69	1 7	0.0 3	1.6 26																		
86.058	338.9	0.44	3 7	+0.1 3	0.2 26	87.103	16.6	1.61	1 5	-0.1 3	2.0 26																		
86.063	329.9	0.55	2 6	0.0 3	26	87.032	16.5	1.62	4n	1.7	26-Inch																		
86.085	336.3	0.44	2 7	-0.2 3	0.2 26	Kuiper, 1937: +0.7, -0.17.																							
78.100	346.3	0.47	4n	0.2	26-Inch	Baize, 1980: -2.0, -0.06.																							
86.069	335.0	0.48	3n	0.2	26-Inch																								
This M-dwarf Hyad has completed about 60																													
degrees of its orbit. A measure by Heintz																													
must belong to another pair.																													
3230	BU 311					04 26.9 -24 05					B 1937						04 30.3 -17 47												
78.784	114.8	0.45	2 6	+0.5 1	0.2 36	78.789	110.4	0.16	2 8	0.0 1	36																		
78.787	117.9	0.31	2 4	+0.3 1	36	78.789	110.4	0.16	1n	36-Inch																			
78.789	120.1	0.39	2 8	+0.3 1	0.2 36	Considerable retrograde motion.																							
84.795	117.6	0.41	2 7	+0.3 4	0.2 36	I 1488						04 31.3 -42 27																	
84.798	123.7	0.38	2 7	+0.2 4	0.1 36	78.792	183.7	0.23	2 6	+0.1 1	0.0 60																		
84.801	118.6	0.40	2 5	0.0 4	0.2 36	78.800	186.6	0.20	2 6	+0.2 1	0.0 60																		
78.787	117.6	0.38	3n	0.2	36-Inch	78.796	185.2	0.22	2n	0.0	60-Inch																		
84.798	120.0	0.40	3n	0.2	36-Inch																								
Horeschi, 1957: +2.7, -0.14; -0.5, -0.18.																													
Scardia, 1982 (1): +3.8, -0.14;																													
+1.0, -0.18.																													
(2): +3.7, -0.12;																													
+0.1, -0.14.																													

	I 1489			04 39.5 -45 07	3387	A 2353			04 41.5 +16 44
84.795	252.2	0.20	2 7	+0.2 4 0.3 36	77.108	151.4	0.19	3 7	0.0 4 0.0 26
84.798	255.2	0.18	2 7	+0.3 4 0.4 36	77.133	145.1	0.18	3 7	0.0 4 0.0 26
84.801	255.6	0.18	2 5	-0.2 4 36	77.169	146.3	0.19	2 7	+0.5 4 0.0 26
84.798	254.3	0.19	3n	0.4 36-Inch	77.137	147.6	0.19	3n	0.0 26-Inch
Heintz, 1975: +25.2, 0.00. Well ahead of the prediction.					Appears to be in rapid motion, but the few measures since discovery preclude further conclusions at this time.				
	HJ 3683			04 40.3 -58 57		B 1469			04 41.7 -52 19
83.154	271.3	3.01	2 5	+0.6 3 0.2 36	84.795	268.8	0.34	2 4	+0.3 4 0.7 36
83.156	272.5	2.99	2 5	+0.8 3 0.1 36	84.798	262.2	0.31	2 7	+0.3 4 0.5 36
					84.801	262.8	0.36	2 4	-0.1 4 0.3 36
83.155	271.9	3.00	2n	0.1 36-Inch	84.798	264.6	0.34	3n	0.5 36-Inch
Valbousquet, 1981: +2.6, +0.18.					3390	STF 577			04 42.2 +37 31
	WOR 17			04 40.6 -09 12	77.147	24.0	1.00	2 3	0.0 3 0.0 26
78.770	282.3	1.20	2 5	+0.2 1 0.1 36	77.760	23.6	0.98	2 4	+0.1 3 0.0 26
78.773	278.2	1.22	2 7	+0.3 1 0.2 36	77.946	20.9		2 5	-0.1 3 0.0 26
78.781	280.8	1.16	2 4	0.0 1 0.2 36	78.064	24.7	1.07	2 6	0.0 3 0.0 26
78.784	280.1	1.25	2 7	0.0 1 0.1 36	77.729	23.3	1.02	3n	0.0 26-Inch
83.148	290.7	0.85	2 7	+1.1 3 0.2 36	Hock and Flinner, 1970: -0.4, -0.11.				
83.151	288.8	0.90	2 6	+1.5 3 0.2 36	3405	B 689			04 43.1 -22 20
83.154	288.3	0.95	2 6	+1.3 3 0.2 36	84.787	283.6	0.55	2 7	+0.3 3 1.0 60
84.773	294.0	0.76	2 5	+0.1 3 0.2 60	84.790	283.5	0.51	2 5	+0.3 3 0.8 60
84.784	296.4	0.76	2 6	+0.4 3 0.3 60	84.788	283.6	0.53	2n	0.9 60-Inch
84.787	293.7	0.74	2 7	+0.2 3 0.0 60	3446	OL 2			04 46.2 -21 28
84.790	292.3	0.76	2 5	+0.2 3 0.1 60	84.795	226.2	4.26	2 6	+0.4 4 3.3 36
78.777	280.4	1.21	4n	0.1 36-Inch	84.798	226.2	4.31	2 7	+0.4 4 2.5 36
83.151	289.3	0.90	3n	0.2 36-Inch	84.801	226.4	4.31	2 5	+0.1 4 3.0 36
84.784	294.1	0.76	4n	0.0 60-Inch	84.798	226.3	4.29	3n	2.9 36-Inch
Closing in and now showing rapid motion.					No measures for 52 years.				
	FIN 88			04 40.8 -56 02	3449	OL 3			04 46.5 -22 47
78.792	25.6	1.80	1 7	+0.2 1 4.2 60	78.770	57.7	1.73	2 5	+0.3 1 0.4 36
78.800	26.3	1.83	1 6	+0.1 1 4.0 60	78.773	58.1	1.70	2 7	+0.3 1 0.7 36
78.796	26.0	1.82	2n	4.1 60-Inch	78.781	58.9	1.66	2 5	0.0 1 0.7 36
Increase in separation probable.					78.775	58.2	1.70	3n	0.6 36-Inch
3383	STF 583			04 41.0 +00 58	3450	HU 443			04 47.6 +22 11
86.830	326.0	5.93	2 4	-0.1 3 1.0 26	77.108	289.5	0.51	2 7	0.0 4 0.5 26
87.095	326.7	5.43	2 4	0.0 3 0.6 26	77.133	292.6	0.52	2 7	0.0 4 0.7 26
87.103	326.6	5.66	2 5	-0.1 3 2.6 26	77.169	291.4	0.49	4 7	+0.5 4 0.7 26
87.009	326.4	5.67	3n	26-Inch	77.137	291.2	0.51	3n	0.6 26-Inch
Variable?									

45

[illegible]

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

3490	HU 818		04 54.0 +56 03		3520	HU 555 AB		04 56.3 +52 06
78.149	73.9	0.37	2 6 0.0 3 0.3 26		78.149	309.2	0.17	2 5 0.0 3 0.0 26
78.932	76.0	0.43	2 6 -0.3 3 0.5 26		78.932	323.1	0.19	2 6 -0.2 3 0.0 26
80.095	73.1	0.33	2 6 -0.2 3 0.5 26		80.095	315.9	0.19	2 5 0.0 3 26
					80.120	309.7	0.19	2 5 -0.4 3 26
79.059	74.3	0.38	3n 0.4 26-Inch		85.140	351.5	0.14	2 8 0.0 4 0.0 26
					86.058	342.9	0.13	2 6 -0.1 3 26
					86.063	351.2	0.19	2 7 -0.2 3 26
					86.085	354.9	0.17	2 7 -0.4 3 26
	RST 5501		04 54.5 -03 13		79.324	314.5	0.19	4n 0.0 26-Inch
78.097	50.5	0.25	2 7 0.0 3 0.0 26		85.836	350.1	0.16	4n 0.0 26-Inch
78.108	49.5	0.29	2 5 0.0 3 0.0 26					
78.113	55.6	0.27	2 6 -0.3 3 0.0 26		Heintz, 1976:	-16.9, +0.01; -6.5, -0.03.		
78.770	52.5	0.31	2 5 +0.2 1 0.0 36					
79.773	53.3	0.32	2 7 +0.2 1 0.0 36			STF 608 ABXC		
78.784	53.0	0.33	2 7 +0.2 1 0.0 36					
84.795	43.5	0.27	2 8 +0.4 4 0.1 36		78.149	115.2	4.54	2 5 +0.1 3 0.7 26
84.798	44.0	0.25	2 7 +0.3 4 0.2 36		80.120	114.5	4.57	2 5 -0.3 3 1.0 26
84.801	42.5	0.29	2 6 0.0 4 0.0 36		79.135	114.8	4.56	2n 0.8 26-Inch
78.106	51.9	0.27	3n 0.0 26-Inch		3555	HU 215		04 56.8 -10 57
78.776	52.9	0.32	3n 0.0 36-Inch		84.784	292.6	0.61	2 5 +0.3 3 0.6 60
84.798	43.3	0.27	3n 0.1 36-Inch		84.787	294.2	0.61	2 6 +0.2 3 0.6 60
					84.790	292.9	0.70	2 6 +0.2 3 1.2 60
	FIN 90		04 54.6 -60 24		84.787	293.2	0.64	3n 0.8 60-Inch
78.792	218.2	1.04	1 6 +0.1 1 1.6 60					
78.800	220.9	1.08	2 6 +0.1 1 1.2 60		3559	A 2625		04 57.1 -13 38
78.796	219.6	1.06	2n 1.4 60-Inch		78.770	220.5	0.22	2 5 +0.5 1 0.0 36
					78.773	217.8	0.17	2 6 +0.4 1 36
3517	STT 90		04 54.9 +08 36		78.784	227.9	0.16	2 7 +0.4 1 0.0 36
87.103	338.7	1.90	2 5 -0.1 3 2.0 26		78.776	222.1	0.18	3n 0.0 36-Inch
87.112	343.7	1.96	2 4 0.0 3 26			I 1611		04 57.3 -39 10
87.114	340.9	1.87	1 7 0.0 3 1.8 26		78.800	318.9	0.34	2 6 +0.2 1 0.2 60
87.153	340.0	1.93	4 4 -0.2 3 1.8 26		78.800	318.9	0.34	1n 0.2 60-Inch
87.172	342.0	1.97	4 4 0.0 3 1.8 26		3558	A 2624		04 57.4 +00 59
					78.932	128.1	0.20	2 5 0.0 3 0.0 26
87.131	341.1	1.93	5n 1.8 26-Inch		81.095	116.0	0.26	2 5 0.0 3 26
					81.100	114.6	0.20	2 7 -0.2 3 0.0 26
	RST 4257		04 55.3 -03 51		80.376	119.6	0.22	3n 0.0 26-Inch
84.795	330.4	0.21	2 7 +0.3 4 0.2 36					
84.798	325.4	0.26	2 7 +0.4 4 0.0 36		3532	A 2623		04 55.3 -13 08
84.801	330.9	0.26	2 4 +0.1 4 36		78.770	205.6	1.23	1 5 +0.3 1 1.5 36
84.798	328.9	0.24	3n 0.1 36-Inch		78.773	206.3	1.24	2 6 +0.3 1 1.0 36
					78.784	208.3	1.25	2 7 +0.3 1 0.8 36
	Angular decrease.				78.776	206.7	1.24	3n 1.1 36-Inch
					3580	A 1551		04 59.8 +43 19
					75.884	98.5	0.24	2 7 0.0 3 0.0 26
					77.108	101.5	0.23	2 7 +0.2 4 0.1 26
					77.133	100.3	0.16	2 7 +0.1 4 0.0 26
					76.708	100.1	0.21	3n 0.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

47

3589	STT 92	05 00.3 +39 24		DON 91	05 02.5 -21 15
75.884	274.1	3.84	2 8 0.0 3 2.8 26	78.792	6.6 1.03 1 8 +0.2 1 2.0 60
77.119	274.4	3.70	2 4 -0.2 3 2.8 26	78.800	5.0 1.10 1 7 +0.3 1 2.5 60
77.147	275.2	3.81	2 3 0.0 3 3.0 26	84.787	28.3 1.17 2 7 +0.4 3 2.4 60
				84.790	26.5 1.06 2 7 +0.2 3 1.8 60
76.717	274.6	3.78	3n 2.9 26-Inch	78.796	5.8 1.06 2n 2.2 60-Inch
				84.788	27.4 1.12 2n 2.1 60-Inch
3596	STT 93	05 00.5 +05 06		Heintz, 1978: -2.2, +0.11; +0.9, +0.09.	
85.080	247.7	1.10	2 7 0.0 3 0.5 26		
85.138	251.0	1.16	2 6 -0.1 3 1.2 26		
85.140	249.4	1.10	2 7 0.0 4 0.6 26		
85.119	249.4	1.12	3n 0.8 26-Inch		
Baize, 1980: +5.7, +0.14. This recent or- bit gives rather poor representation.				3641	BU 884 05 02.9 -12 26
				84.773	191.8 0.58 2 5 +0.1 3 0.2 60
				84.784	192.5 0.54 2 5 +0.4 3 0.3 60
				84.787	194.0 0.53 2 6 +0.2 3 0.2 60
				84.781	192.8 0.55 3n 0.1 60-Inch
3610	A 2629	05 01.1 -11 12		No measures in 42 years. Angular decrease.	
78.792	227.5	0.11	2 8 +0.3 1 0.0 60		
78.800	226.6	0.11	2 6 +0.2 1 0.0 60		
78.796	227.0	0.11	2n 0.0 60-Inch		
Appears to be in rapid motion.				3652	A 2632 05 04.0 +02 57
3593	STF 619	05 01.3 +50 15		77.760	126.3 0.85 2 4 0.0 3 0.0 26
77.119	146.0	4.16	2 4 -0.2 3 0.0 26	77.946	125.4 2 5 -0.2 3 0.0 26
77.147	147.1	4.13	2 3 0.0 3 0.0 26	78.064	124.1 0.92 2 5 0.0 3 0.0 26
77.760	146.6	4.18	2 5 -0.1 3 0.2 26	78.083	121.9 0.84 2 5 -0.1 3 0.0 26
78.064	146.9	4.23	2 5 -0.2 3 0.0 26	77.963	124.4 0.87 3n 0.0 26-Inch
77.523	146.6	4.18	4n 0.0 26-Inch		
3609	A 2041	05 01.4 +08 52			JC 9 05 04.4 -35 29
78.064	110.4	0.75	2 5 0.0 3 1.0 26	83.145	309.9 3.22 2 5 +0.1 3 3.0 36
78.083	106.2	0.75	2 6 -0.1 3 1.8 26	83.148	309.1 3.24 2 8 +0.2 3 3.8 36
78.097	105.6	0.81	2 6 0.0 3 1.4 26	83.146	309.5 3.23 2n 3.4 36-Inch
78.081	107.4	0.77	3n 1.4 26-Inch		
3614	HU 445	05 01.7 +20 50			COO 28 05 04.9 -40 34
80.095	271.3	0.37	2 6 -0.1 3 0.3 26	83.145	239.3 1.17 2 5 +0.3 3 0.5 36
80.104	275.3	0.36	2 5 -0.3 3 0.3 26	83.148	243.2 1.36 2 7 +0.3 3 0.2 36
80.117	274.3	0.34	2 5 -0.8 3 0.3 26	83.151	240.3 1.27 2 7 +0.3 3 0.3 36
80.120	273.6	0.38	2 5 -0.2 3 0.3 26	83.148	240.9 1.27 3n 0.3 36-Inch
80.109	273.6	0.36	4n 0.3 26-Inch		
Baize, 1957: +4.3, -0.05. Scardia, 1986: +4.4, -0.02. Quadrant re- versed. Not an improvement.				3672	STT 95 05 05.5 +19 48
3628	A 1021	05 02.3 -00 53		75.884	307.1 0.94 2 7 0.0 3 0.4 26
80.095	60.6	0.56	2 4 0.0 3 26	76.966	306.4 0.90 2 5 -0.1 4 0.4 26
80.120	66.2	0.60	2 5 -0.2 3 0.0 26	77.106	306.2 0.89 2 5 -0.1 3 0.6 26
80.172	63.2	0.80	2 5 +0.3 3 26	77.119	306.3 0.79 2 5 -0.2 3 0.5 26
80.129	63.3	0.65	3n 0.0 26-Inch	85.162	306.4 0.92 2 5 -0.5 4 0.4 26
				85.179	305.3 0.88 2 5 0.0 3 0.5 26
				86.058	302.8 0.93 2 6 -0.1 3 0.3 26
				86.063	304.3 0.97 2 7 -0.2 3 0.6 26
				87.177	303.1 0.99 2 7 -0.1 3 0.2 26
				87.180	303.6 0.94 2 6 0.0 3 0.3 26
				76.769	306.5 0.88 4n 0.5 26-Inch
				85.616	304.7 0.92 4n 0.4 26-Inch
				87.178	303.4 0.96 2n 0.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

	FIN 376			05 07.2 -19 24			3730	BU 1047 BC			05 09.8 +28 02		
78.792	36.5	0.10	2 8	+0.3	1 0.0	60	78.108	88.8	0.27	2 6	-0.1	3 0.3	26
78.800	38.8	0.09	2 7	+0.3	1 0.0	60	78.113	89.5	0.25	2 7	-0.3	3 0.3	26
							78.149	86.0	0.29	2 5	0.0	3 0.4	26
78.796	37.6	0.10	2n	0.0	60-Inch		86.063	72.9	0.35	2 7	-0.2	3 0.4	26
							86.085	76.2	0.30	2 8	-0.5	3 0.0	26
							87.103	83.8	0.40	2 4	-0.2	3 0.5	26
							87.114	81.8	0.28	2 7	0.0	3 0.0	26
3711	STT 98			05 07.8 +08 30			78.123	88.1	0.27	3n	0.3	26-Inch	
							86.591	78.7	0.33	4n	0.2	26-Inch	
75.884	32.5	0.78	1 7	+0.1	3 0.6	26	Heintz, 1976: +2.2, -0.03; +3.6, 0.00.						
76.016	31.1	0.79	1 5	0.0	3 0.3	26	3748	A 484			05 10.3 -07 35		
76.966	29.6	0.59	1 4	0.0	4 0.8	26	78.773	295.2	0.15	2 7	+0.3	1 0.0	36
77.106	25.7	0.82	2 4	0.0	3 0.8	26	78.784	298.5	0.22	2 6	+0.2	1 0.0	36
77.119	29.5	0.66	1 4	-0.1	3 0.8	26	78.789	301.5	0.16	2 9	+0.1	1 0.0	36
77.760	25.9	0.73	1 5	0.0	3 0.6	26							
77.946	25.4	0.69	1 5	-0.2	3 0.8	26	78.782	298.4	0.18	3n	0.0	36-Inch	
78.064	24.3	0.67	1 6	0.0	3 0.5	26	Possible motion in a highly-inclined or-bit.						
78.083	23.9	0.72	1 6	-0.1	3 0.9	26	3734	STF 644			05 10.4 +37 18		
80.095	13.2	0.65	1 5	0.0	3 0.8	26	77.760	223.8	1.62	2 5	+0.1	3 0.0	26
80.104	15.3	0.73	1 5	-0.3	3 0.6	26	78.097	222.0	1.56	2 7	0.0	3 0.3	26
80.117	17.2	0.72	2 5	-0.1	3 0.8	26	78.108	223.9	1.48	2 8	0.0	3 0.3	26
80.120	17.1	0.66	3 6	-0.1	3 0.7	26	77.988	223.2	1.55	3n	0.2	26-Inch	
81.015	15.6	0.70	2 6	0.0	4 0.7	26							
81.095	17.0	0.60	1 5	+0.3	3 0.8	26	3765	A 2429			05 12.2 +17 15		
81.100	17.0	0.69	2 8	0.0	3 0.8	26	80.095	33.9	0.81	2 5	0.0	3 0.6	26
85.080	4.1	0.71	1 7	0.0	3 0.6	26	80.120	31.6	0.73	2 5	0.0	3 0.8	26
85.138	5.0	0.71	1 5	-0.1	3 0.8	26	80.172	35.1	0.93	2 5	-0.2	3 0.8	26
85.140	2.2	0.64	1 7	0.0	4 0.8	26	80.129	33.5	0.82	3n	0.7	26-Inch	
85.162	4.4	0.68	1 5	-0.4	4 0.8	26	3783	OL 87			05 12.7 -03 35		
86.830	0.8	0.76	1 4	-0.1	3 0.8	26	78.770	303.9	2.37	2 5	+0.2	1 0.1	36
87.095	0.1	0.67	1 5	0.0	3 0.7	26	78.787	303.3	2.58	2 5	+0.2	1 0.4	36
87.098	357.1	0.68	1 6	-0.2	3 0.8	26	78.789	303.1	2.43	2 8	+0.2	1 0.1	36
87.103	359.7	0.69	3 5	-0.2	3 0.8	26	78.782	303.4	2.46	3n	0.2	36-Inch	
							3747	HU 1099			05 12.9 +64 45		
76.618	29.7	0.73	5n	0.7	26-Inch		78.932	15.2	0.45	1 5	-0.3	3 0.3	26
77.963	24.9	0.70	4n	0.7	26-Inch		81.100	16.0	0.44	2 8	-0.3	3 0.4	26
80.109	15.7	0.69	4n	0.7	26-Inch		85.138	15.7	0.45	1 5	-0.2	3 0.3	26
81.070	16.5	0.66	3n	0.8	26-Inch		81.723	15.6	0.45	3n	0.3	26-Inch	
85.130	3.9	0.68	4n	0.8	26-Inch		3768	A 1554			05 12.9 +41 35		
87.032	359.4	0.70	4n	0.8	26-Inch		77.108	1.6	0.22	1 6	+0.1	4 0.2	26
Baize, 1969: -1.1, +0.02; -1.9, 0.00;							77.133	355.5	0.21	1 7	0.0	4 0.0	26
-4.5, 0.00; -0.7, -0.03;							77.169	2.0	0.19	1 7	+0.2	4 0.0	26
-0.3, 0.00; +1.4, +0.01.							77.137	359.7	0.21	3n	0.0	26-Inch	
3720	OL 94			05 08.2 -03 30									
84.773	263.2	2.60	2 5	+0.2	3 2.0	60							
84.784	265.0	2.66	2 5	+0.4	3 2.2	60							
84.778	264.1	2.63	2n	2.1	60-Inch								
3728	A 2636			05 08.9 +03 13									
86.063	150.6	0.20	1 6	-0.1	3 0.4	26							
86.085	155.0	0.24	1 7	-0.5	3 0.0	26							
87.103	157.6	0.36	2 5	-0.1	3 0.4	26							
87.114	153.5	0.25	1 7	-0.1	3 0.6	26							
86.591	154.2	0.26	4n	0.3	26-Inch								
Scardia, 1982: -4.0, -0.01. Quadrant re-													
versed.													

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

49

	HJ 3743		05 13.1 -59 59		3857	A 844		05 16.5 -01 38
83.143	138.6	4.84	2 7 +0.3 3 1.0 36		78.789	133.9	0.15	2 9 +0.2 1 0.0 36
83.145	140.3	4.76	2 5 +0.2 3 0.7 36		78.789	133.9	0.15	1n 0.0 36-Inch
83.156	138.9	4.73	2 5 +0.4 3 1.0 36		Baize, 1981: +5.3, -0.02.			
83.148	139.3	4.78	3n 0.9 36-Inch					
3796	A 1946		05 13.4 +07 28		3867	A 52		05 16.9 -05 38
85.162	1.7	1.54	1 5 -0.1 4 1.1 26		84.787	162.5	1.86	1 6 +0.3 3 2.0 60
86.058	1.3	1.57	1 5 -0.1 3 1.4 26		84.790	164.0	1.94	1 7 0.0 3 2.4 60
86.063	1.6	1.63	1 6 -0.1 3 1.4 26		84.788	163.2	1.90	2n 2.2 60-Inch
85.761	1.5	1.58	3n 1.3 26-Inch					
3799	STT 517		05 13.5 +01 58		3851	HU 1101		05 17.2 +39 28
78.064	239.7	0.45	2 6 0.0 3 0.2 26		78.083	292.2	0.28	2 6 0.0 3 2.0 26
78.083	238.5	0.34	2 6 -0.1 3 0.2 26		78.097	288.5	0.38	1 7 0.0 3 1.8 26
78.097	234.7	0.34	2 6 0.0 3 0.4 26		78.108	293.8	0.33	3 6 0.0 3 1.5 26
78.108	235.0	0.40	2 5 0.0 3 0.4 26		78.113	288.3	0.32	1 6 -0.4 3 1.6 26
85.080	236.8	0.51	2 7 0.0 3 0.3 26		78.100	290.7	0.33	4n 1.7 26-Inch
85.140	235.2	0.57	2 8 +0.1 4 0.3 26					
85.162	238.2	0.53	2 5 -0.3 4 0.5 26		3880	A 2639		05 18.1 +03 41
85.179	236.8	0.55	2 6 -0.1 3 0.4 26		85.080	290.8	0.68	2 7 0.0 3 0.8 26
78.088	237.0	0.38	4n 0.3 26-Inch		85.138	289.1	0.63	2 5 +0.3 3 0.7 26
85.140	236.8	0.54	4n 0.4 26-Inch		85.140	290.0	0.82	2 8 +0.1 4 0.5 26
van den Bos, 1960: +1.0, -0.06; -1.9, +0.07.					85.119	290.0	0.71	3n 0.7 26-Inch
3814	I 476		05 13.5 -26 11		3870	STF 657		05 18.8 +52 50
78.770	2.1	0.57	2 5 +0.3 1 0.0 36		78.083	299.9	0.97	2 5 0.0 3 0.3 26
78.773	1.4	0.59	2 7 +0.4 1 0.3 36		78.097	299.7	1.00	2 7 0.0 3 0.5 26
78.784	359.2	0.61	2 4 +0.6 1 0.0 36		78.108	300.5	0.84	2 5 +0.1 3 0.3 26
78.776	0.9	0.59	3n 0.1 36-Inch		78.113	301.6	1.03	2 6 -0.4 3 0.2 26
Slow direct motion, distance unchanged.					78.100	300.4	0.96	4n 0.3 26-Inch
	DON 96		05 14.3 -22 33			RST 2375		05 19.0 -21 59
84.795	172.2	1.72	2 7 +0.3 4 0.3 36		84.773	317.5	0.31	2 5 +0.1 3 60
84.798	170.5	1.65	1 8 +0.3 4 0.2 36		84.784	319.4	0.31	2 5 +0.3 3 0.3 60
84.801	171.2	1.62	2 5 0.0 4 0.4 36		84.787	318.7	0.26	2 5 +0.2 3 0.3 60
84.798	171.3	1.66	3n 0.3 36-Inch		84.781	318.5	0.29	3n 0.3 60-Inch
3837	STF 665		05 15.7 +19 44			HEI 41		05 19.1 +14 29
77.106	256.1	1.68	2 5 0.0 3 0.5 26		85.162	99.3	0.31	2 5 -0.1 4 0.3 26
77.119	256.2	1.64	2 4 -0.1 3 0.3 26		85.179	100.0	0.30	2 5 0.0 3 0.2 26
77.169	256.9	1.60	2 7 +0.2 4 0.4 26		86.058	92.9	0.29	2 6 -0.2 3 0.2 26
77.131	256.4	1.64	3n 0.4 26-Inch		86.063	93.7	0.29	2 6 -0.1 3 26
					85.616	96.5	0.30	4n 0.2 26-Inch
3856	BU 318		05 16.3 -03 29		3900	A 53		05 19.1 -03 05
78.773	258.0	0.52	2 7 +0.4 1 0.2 36		77.108	7.7	1.92	4 6 0.0 4 3.5 26
78.784	259.7	0.55	2 7 +0.3 1 0.1 36		77.133	6.6	1.79	4 7 0.0 4 3.5 26
78.787	260.5	0.48	2 5 0.0 1 0.2 36		77.169	7.7	1.90	1 7 +0.3 4 3.2 26
78.781	259.4	0.52	3n 0.2 36-Inch		77.137	7.3	1.87	3n 3.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

3927	BU 190	05 20.4 -08 02							COU 1090	05 24.0 +32 38
84.795	333.4	0.56	2 7 +0.2 4 0.4 36						80.095	235.2 0.24 2 6 0.0 3 0.0 26
84.798	333.3	0.55	2 8 +0.2 4 0.3 36						80.172	226.2 0.17 2 6 -0.3 3 26
84.801	332.8	0.47	2 5 0.0 4 0.4 36						81.100	249.0 0.20 2 7 -0.1 3 26
84.798	333.2	0.53	3n 0.4 36-Inch						80.455	237 0.20 3n 26-Inch
	HJ 3753	05 21.2 -35 43							Uncertain.	
83.159	221.0	2.89	2 4 +0.4 3 0.8 36						3955	STF 676 05 24.8 +64 44
83.162	220.9	3.18	2 4 +0.4 3 1.2 36						75.884	266.0 1.29 2 6 0.0 3 0.8 26
83.160	221.0	3.04	2n 1.0 36-Inch						76.016	270.5 1.33 2 6 -0.1 3 0.6 26
3937	A 2640	05 21.6 +07 40							76.966	267.2 1.26 2 5 -0.1 4 0.8 26
81.100	91.0	0.19	2 7 -0.2 3 26						77.119	268.3 1.27 2 4 -0.2 3 1.2 26
85.162	86.3	0.25	2 5 -0.1 4 1.2 26						86.063	267.1 1.37 2 6 -0.1 3 0.8 26
85.179	81.9	0.25	2 5 0.0 3 1.0 26						86.085	268.4 1.28 2 7 -0.3 3 0.6 26
87.114	78.1	0.33	2 7 -0.1 3 1.0 26						87.103	267.3 1.47 2 4 -0.2 3 0.8 26
84.639	84.3	0.26	4n 1.0 26-Inch						87.114	269.3 1.41 2 7 -0.1 3 0.6 26
Difficult. A substantial angular increase since the last measure.									76.946	268.0 1.29 4n 0.8 26-Inch
3954	HJ 3752	05 21.8 -24 46							86.591	268.0 1.38 4n 0.7 26-Inch
83.159	93.5	3.52	2 4 +0.5 3 1.0 36						3956	STF 677 05 24.8 +63 23
83.162	94.0	3.54	2 6 +0.7 3 1.2 36						78.108	161.2 0.75 2 5 0.0 3 0.4 26
83.160	93.8	3.53	2n 1.1 36-Inch						78.113	160.1 0.80 2 7 -0.4 3 0.8 26
3964	OL 137	05 22.6 -07 53							78.149	160.6 0.93 2 6 -0.3 3 0.6 26
78.784	210.0	1.55	2 8 +0.3 1 0.2 36						86.063	151.6 0.98 2 6 -0.1 3 0.6 26
78.787	210.3	1.53	2 5 +0.1 1 0.3 36						86.085	150.7 1.02 2 7 -0.2 3 0.8 26
78.789	209.8	1.62	2 8 +0.2 1 0.3 36						87.114	147.7 0.87 1 7 -0.1 3 0.4 26
78.787	210.0	1.57	3n 0.3 36-Inch						87.174	149.0 0.92 2 7 0.0 3 0.4 26
3974	A 486	05 23.1 -08 06							78.123	160.6 0.83 3n 0.6 26-Inch
78.784	82.1	0.61	2 7 +0.4 1 1.1 36						86.609	149.8 0.95 4n 0.5 26-Inch
78.787	75.7	0.46	2 5 +0.2 1 1.2 36						Heintz, 1962: -0.6, -0.19; -0.7, -0.13.	
78.789	80.0	0.51	2 8 +0.3 1 1.2 36						I 345	05 24.8 -52 19
78.787	79.3	0.53	3n 1.2 36-Inch						83.143	96.0 0.16 2 7 +0.3 3 36
	I 275	05 23.4 -36 40							83.145	96.8 0.21 2 5 +0.2 3 36
83.148	264.6	0.57	2 8 +0.1 3 0.5 36						83.154	94.7 0.18 2 5 0.0 3 36
83.151	262.1	0.54	2 7 +0.1 3 0.7 36						83.147	95.8 0.18 3n 36-Inch
84.795	259.9	0.58	2 7 +0.5 4 0.6 36						Decrease in angle and separation is now rapid.	
84.798	257.3	0.56	2 7 +0.3 4 0.6 36						I 390	05 24.9 -58 10
84.801	260.0	0.56	2 6 +0.2 4 0.4 36						83.148	325.1 0.16 2 7 +0.1 3 36
83.150	263.4	0.56	2n 0.6 36-Inch						83.151	326.5 0.19 2 7 +0.1 3 36
84.798	259.1	0.57	3n 0.5 36-Inch						83.150	325.8 0.18 2n 36-Inch
More than a quadrant has been described.									3994	HU 1104 05 25.0 +37 16
									77.106	220.6 0.94 2 5 0.0 3 0.6 26
									77.760	227.7 0.88 2 4 -0.1 3 1.0 26
									78.064	225.5 0.88 2 5 -0.1 3 0.6 26
									78.083	221.2 0.99 2 6 -0.1 3 0.5 26
									77.753	223.8 0.92 4n 0.7 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

51

4006	HU 1226	05 25.1 +15 21	4078	DA 6	05 28.9 -03 18
78.932	55.0 0.62	2 6 -0.3 3 0.0 26	87.177	202.8 0.17	2 7 -0.3 3 26
80.095	52.6 0.63	2 5 0.0 3 0.4 26	87.180	202.5 0.19	2 6 -0.2 3 0.4 26
80.120	55.3 0.63	2 5 -0.2 3 0.3 26	87.194	206.2 0.14	2 7 0.0 3 26
79.716	54.3 0.63	3n 0.2 26-Inch	87.184	203.8 0.17	3n 0.4 26-Inch
	I 1150	05 26.8 -64 35	4074	A 2645	05 29.0 +05 50
83.143	95.1 0.23	2 6 +0.3 3 36	81.100	144.5 1.29	2 7 0.0 3 0.2 26
83.145	95.0 0.23	2 5 +0.3 3 36	85.080	143.9 1.23	2 7 0.0 3 0.4 26
83.144	95.0 0.23	2n 36-Inch	85.138	145.4 1.17	2 5 +0.2 3 0.2 26
	I 276	05 27.0 -68 37	83.773	144.6 1.23	3n 0.3 26-Inch
83.143	166.0 1.20	2 7 +0.3 3 0.8 36	4078	DA 6	05 29.0 -03 18
83.145	165.4 1.29	2 6 +0.4 3 0.4 36	84.787	202.2 0.16	2 5 +0.4 3 60
83.144	165.7 1.24	2n 0.6 36-Inch	84.790	196.0 0.14	2 7 0.0 3 60
4032	HO 226	05 27.1 +27 36	84.788	199.1 0.15	2n 60-Inch
80.095	259.5 0.71	2 5 0.0 3 0.0 26	Rapid direct motion.		
80.120	261.2 0.77	2 5 -0.2 3 0.2 26	4073	STT 108	05 29.4 +18 22
80.172	261.0 0.77	2 5 0.0 3 0.0 26	87.177	130.5 3.25	2 6 -0.2 3 3.0 26
80.129	260.6 0.75	3n 0.0 26-Inch	87.180	128.0 3.17	2 6 -0.1 3 3.0 26
4030	HU 1227	05 27.3 +38 35	87.178	129.2 3.21	2n 3.0 26-Inch
78.064	138.1 0.45	2 5 0.0 3 0.5 26	4067	A 1035	05 29.5 +31 26
78.083	138.2 0.51	2 6 0.0 3 0.8 26	81.100	119.0 1.63	2 7 -0.1 3 1.1 26
78.113	137.6 0.47	1 7 -0.3 3 1.6 26	85.080	117.2 1.84	2 6 0.0 3 1.5 26
78.087	138.0 0.48	3n 1.0 26-Inch	85.138	119.7 1.53	2 5 -0.2 3 2.2 26
	SEE 53	05 27.6 -20 55	83.773	118.6 1.67	3n 1.6 26-Inch
83.154	239.5 0.16	2 6 +0.3 3 36	4088	BU 557 BC	05 29.5 +03 09
83.173	232.4 0.14	2 5 +0.5 2 60	77.108	182.5 0.30	1 7 +0.1 4 0.2 26
83.176	230.1 0.15	2 5 +0.7 2 60	77.133	182.6 0.27	1 7 -0.1 4 0.0 26
83.154	239.5 0.16	1n 36-Inch	77.169	183.4 0.30	1 7 +0.2 4 0.2 26
83.174	231.2 0.14	2n 60-Inch	77.137	182.8 0.29	3n 0.1 26-Inch
Baize, 1981: +15.5, -0.03; +7.1, -0.05.					
4022	A 319	05 27.8 -04 00		RST 4781	05 30.1 -01 45
78.792	356.4 0.17	1 8 +0.1 1 0.2 60	84.795	19.0 0.31	2 7 +0.2 4 0.2 36
78.800	357.0 0.18	1 6 +0.2 1 0.0 60	84.798	20.6 0.36	2 7 +0.1 4 0.2 36
78.796	356.7 0.18	2n 0.1 60-Inch	84.801	20.5 0.30	1 6 -0.1 4 0.3 36
Closed in.			84.798	20.0 0.32	3n 0.2 36-Inch
	DON 109	05 28.0 -67 35		I 62	05 30.5 -47 13
83.143	170.9 1.56	2 6 +0.4 3 0.3 36	83.148	181.0 0.81	2 7 +0.2 3 0.4 36
83.145	169.6 1.52	2 6 +0.5 3 0.3 36	83.151	178.8 0.78	2 7 +0.1 3 0.5 36
83.144	170.2 1.54	2n 0.3 36-Inch	83.150	179.9 0.80	2n 0.4 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

4079	A 1561			05 30.7 +5. 40		4150	STF 734 AB			05 33.2 -01 43
76.016	356.0	0.40	1 6	-0.1 3 0.8 26		78.064	357.2	1.56	1 5	0.0 3 1.2 26
76.966	351.0	0.47	1 5	-0.1 4 0.8 26		78.083	356.5	1.72	1 6	0.0 3 1.5 26
77.108	353.8	0.52	1 7	0.0 4 1.0 26		78.097	355.0	1.48	1 7	0.0 3 1.4 26
76.697	353.6	0.46	3n	0.9 26-Inch		78.081	356.2	1.59	3n	1.4 26-Inch
4115	STF 728			05 30.8 +05 57			BU 1049 CD			
85.140	47.3	1.08	2 7	0.0 4 0.8 26		78.064	292.4	0.57	2 5	0.0 3 0.5 26
85.162	46.7	0.96	2 5	-0.1 4 1.2 26		78.083	297.8	0.49	2 5	+0.1 3 0.8 26
85.179	49.4	1.06	2 5	0.0 3 1.0 26		78.097	293.8	0.57	2 6	+0.1 3 0.6 26
85.160	47.8	1.03	3n	1.0 26-Inch		78.081	294.7	0.54	3n	0.6 26-Inch
Siegrist, 1951: +4.7, +0.07.							HU 1566			05 33.6 -51 04
	RST 4278			05 31.2 -22 14		84.795	68.5	1.58	2 7	+0.4 4 0.2 36
83.156	141.7	2.00	2 4	+0.3 3 36		84.798	68.8	1.35	2 7	+0.2 4 0.2 36
83.159	145.0	2.44	2 4	+0.7 3 36		84.801	70.9	1.48	2 6	-0.1 4 0.4 36
83.162	142.1	2.18	2 5	+0.8 3 0.0 36		84.798	69.4	1.47	3n	0.3 36-Inch
83.159	142.9	2.21	3n	0.0 36-Inch		Erceg, 1985: +0.8, +0.02.				
4134	HEI 42 Aa			05 32.0 -00 18		4181	STT 111			05 35.2 +10 15
87.194	140.3	0.21	2 6	+0.2 3 0.2 26		85.162	351.9	2.77	1 5	-0.1 4 3.4 26
87.213	138.4	0.30	1 8	+0.5 3 0.5 26		85.179	351.1	2.61	1 6	0.0 3 3.0 26
87.224	140.4	0.24	2 7	+0.7 3 0.7 26		86.058	352.7	2.94	1 7	-0.3 3 3.0 26
87.210	139.7	0.25	3n	0.5 26-Inch		85.466	351.9	2.77	3n	3.1 26-Inch
Delta Orionis. The companion will greatly complicate photometric interpretation.							RST 141			05 35.3 -46 57
4076	A 1034			05 32.2 +70 49		83.151	242.7	0.33	2 7	+0.3 3 0.9 36
86.063	148.9	0.79	2 5	-0.1 3 0.4 26		83.154	247.3	0.31	2 5	+0.1 3 0.8 36
86.085	145.2	0.77	2 7	-0.3 3 0.8 26		83.162	243.3	0.27	2 5	+0.4 3 1.0 36
87.114	147.9	0.81	2 7	-0.1 3 0.6 26		83.156	244.4	0.30	3n	0.9 36-Inch
87.174	146.2	0.82	2 7	0.0 3 0.7 26		Heintz, 1979: +1.6, 0.00.				
86.609	147.0	0.80	4n	0.6 26-Inch			FIN 345			05 35.4 -04 25
Heintz, 1976: +4.5, +0.17.						78.792	97.8	0.26	2 8	0.0 1 0.7 60
						78.800	91.0	0.26	2 6	0.0 1 0.8 60
4136	A 2509			05 32.3 +02 17		78.796	94.4	0.26	2n	0.8 60-Inch
80.120	137.2	0.30	2 5	-0.1 3 0.5 26			HU 1393			05 35.5 -33 16
80.172	139.2	0.35	2 5	0.0 3 0.2 26		83.176	331.9	0.66	2 4	+0.4 2 0.8 60
81.100	138.0	0.33	2 7	0.0 3 0.0 26		83.184	330.1	0.53	2 5	+0.8 2 0.7 60
80.464	138.1	0.33	3n	0.2 26-Inch		83.180	331.0	0.60	2n	0.8 60-Inch
4153	DAW 85			05 33.0 -24 15		4204	STF 736			05 37.1 +41 50
78.787	269.6	0.39	2 5	+0.2 1 0.5 36		87.174	356.5	2.31	2 7	0.0 3 0.8 26
78.789	275.7	0.39	4 8	+0.3 1 0.7 36		87.177	357.0	2.59	2 7	-0.1 3 0.5 26
78.788	272.6	0.39	2n	0.6 36-Inch		87.180	358.5	2.49	2 6	-0.1 3 0.5 26
Newburg, 1969: -3.4, -0.22.						87.177	357.3	2.46	3n	0.6 26-Inch
Much closer than the orbit indicates.										

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

53

4208	STF 749	05 37.1 +26 56
77.185	150.2 1.03	2 8 -0.2 3 0.3 26
77.188	149.1 1.06	2 7 0.0 3 0.2 26
77.207	151.2 1.08	3 4 +0.6 3 0.1 26
77.193	150.2 1.06	3n 0.2 26-Inch

I 1152			05 38.7 -69 06		
83.148	219.0	0.45	2 7	+0.3 3	1.0 36
83.151	221.3	0.47	2 5	+0.2 3	1 36
83.176	221.4	0.48	2 5	+1.0 2	1 60
83.150	220.2	0.46	2n	1.0	36-Inch
83.176	221.4	0.48	1n	1	60-Inch

This is the enigmatic object R136a (See
Ap. J. 278, L109, 1984 for a discussion
and references).

4203	A 1562	05 37.2 +43 39
78.127	351.2 0.34	1 6 0.0 3 0.2 26
78.149	351.6 0.33	2 6 -0.2 3 0.2 26
78.932	353.9 0.36	2 6 -0.3 3 0.1 26
87.174	353.0 0.42	2 7 0.0 3 0.3 26
87.177	352.4 0.46	2 7 0.0 3 0.0 26
87.180	356.4 0.46	2 5 0.0 3 0.0 26
78.403	352.2 0.34	3n 0.2 26-Inch
87.177	353.9 0.45	3n 0.1 26-Inch

4247	A 2709	05 39.4 +11 50
85.162	67.6 0.20	2 5 0.0 4 0.0 26
85.179	66.2 0.24	2 5 0.0 3 0.0 26
86.058	66.1 0.20	2 7 -0.3 3 26
86.063	64.2 0.26	2 5 -0.1 3 26
85.616	66.0 0.23	4n 0.0 26-Inch

4232	A 491	05 37.8 -06 42
83.173	226.8 0.17	2 4 +0.4 2 60
83.176	230.0 0.18	2 5 +0.6 2 0.1 60
83.184	231.5 0.18	2 4 +0.9 2 60
83.178	229.4 0.18	3n 0.1 60-Inch

4257	OL 4	05 39.6 -21 37
78.784	257.6 2.02	2 5 +0.2 1 0.0 36
78.787	256.5 2.01	2 5 0.0 1 0.3 36
78.789	256.8 2.02	2 8 +0.3 1 0.2 36
78.787	257.0 2.02	3n 0.2 36-Inch

4224	A 2708	05 37.9 +08 57
78.097	299.5 0.58	2 6 +0.1 3 1.1 26
78.149	303.5 0.47	2 5 -0.1 3 0.5 26
78.932	300.8 0.59	2 5 +0.1 3 0.7 26
78.393	301.3 0.55	3n 0.8 26-Inch

4265	BU 1007	05 41.3 +16 32
77.106	242.6 0.28	2 5 -0.1 3 0.3 26
77.108	244.5 0.28	2 7 +0.1 4 0.7 26
77.119	239.6 0.34	3 5 -0.3 3 0.6 26
77.133	239.3 0.29	2 7 0.0 4 0.8 26
77.116	241.5 0.30	4n 0.6 26-Inch

Valbousquet, 1980: -0.3, -0.01.

4229	BU 1240	05 38.6 +30 30
79.181	89.2 0.10	2 6 -0.1 3 26
79.181	89.2 0.10	1n 26-Inch

HU 1568			05 41.8 -50 00		
83.143	177.3	0.91	2 6	+0.5 3	0.4 36
83.145	181.9	0.88	2 5	+0.7 3	36
83.148	177.1	0.91	2 8	+0.4 3	0.2 36
83.145	178.8	0.90	3n	0.3	36-Inch

Scardia, 1985: 0.0, +0.02.
Speckle observations now define well this
critical portion of the orbit.

4241	BU 1032	05 38.7 -02 36
77.185	164.4 0.22	1 7 -0.1 3 1.6 26
77.188	166.8 0.23	1 7 0.0 3 1.2 26
78.064	161.0 0.26	1 5 +0.1 3 2.0 26
78.083	167.5 0.25	1 5 +0.1 3 1.8 26
77.630	164.9 0.24	4n 1.6 26-Inch

4299	A 494	05 42.9 -06 48
83.173	105.6 0.20	2 5 +0.5 2 0.2 60
83.176	104.2 0.19	2 6 +0.6 2 0.2 60
83.184	103.2 0.20	2 5 +0.9 2 0.3 60
84.787	116.3 0.18	2 6 0.0 3 0.0 60
84.790	114.0 0.18	2 5 -0.1 3 0.3 60
83.178	104.3 0.20	3n 0.2 60-Inch
84.788	115.2 0.18	2n 0.2 60-Inch

Couteau, 1958: -7.3, +0.01; -9.6, +0.01.
Increasing deviation.

Meintz, 1974: -0.9, +0.01.

4301	A 2436			05 43.5 +16 42			4388	STT 119			05 47.9 +07 58		
77.106	115.2	0.24	2 5	0.0	3 0.0	26	85.140	345.1	0.71	2 8	0.0	4 1.2	26
77.108	116.0	0.22	2 7	+0.1	4 0.6	26	85.162	344.2	0.62	1 7	-0.1	4 0.6	26
77.133	110.9	0.22	2 7	-0.2	4 0.6	26	85.179	345.4	0.73	1 5	0.0	3 0.5	26
77.169	119.9	0.22	3 7	+0.1	4 0.4	26							
77.129	115.5	0.22	4n	0.4	26-Inch		85.160	344.9	0.69	3n	0.8	26-Inch	
4320	A 2654			05 44.2 +00 58			4396	A 2657			05 48.3 +01 37		
81.130	338.9	0.20	2 7	-0.1	4 0.0	26	77.188	139.3	0.15	2 7	-0.1	4 0.0	26
85.140	339.1	0.18	2 7	0.0	4 0.0	26	78.792	142.0	0.15	2 8	0.0	1 0.0	60
							78.800	145.8	0.11	2 5	-0.1	1 0.0	60
83.120	339.0	0.19	2n	0.0	26-Inch		80.120	130.1	0.19	2 6	-0.1	3 0.0	26
							81.100	138.0	0.19	2 6	0.0	4 0.0	26
4323	STT 115			05 44.5 +15 04			78.796	143.9	0.13	2n	0.0	60-Inch	
77.106	120.4	0.42	2 5	0.0	3 0.5	26	79.469	135.8	0.18	3n	0.0	26-Inch	
77.108	118.9	0.43	2 7	+0.2	4 0.6	26	Valbousquet, 1980: +2.0, -0.02; -9.1, +0.03. Mourao et al, 1982: +9.3, -0.02; -1.8, +0.02.						
77.119	116.6	0.44	2 4	-0.3	3 0.8	26							
77.169	122.5	0.51	1 7	+0.1	4 1.0	26							
77.126	119.6	0.45	4n	0.7	26-Inch								
4330	A 497			05 44.5 -07 44			4376	STF 3115			05 49.0 +62 48		
83.173	190.8	1.97	2 5	+0.6	2 1.8	60	75.025	358.5	0.82	1 3	-0.7	3 1.4	26
83.176	188.7	2.22	2 6	+0.7	2 2.2	60	75.884	358.3	0.96	1 6	-0.2	3 1.1	26
83.184	187.6	2.18	2 5	+1.0	2 2.3	60	77.106	356.6	1.03	1 5	-0.1	3 0.8	26
							77.185	355.2	0.90	1 7	-0.1	3 1.0	26
83.178	189.0	2.12	3n	2.1	60-Inch		76.300	357.2	0.93	4n	1.1	26-Inch	
4360	A 3018			05 45.7 -14 47			4432	BU 94			05 49.6 -14 29		
78.792	101.4	0.72	2 8	+0.2	1 0.2	60	83.156	165.1	2.44	2 5	+0.1	3 2.5	36
78.800	102.2	0.74	2 5	-0.1	1 0.2	60	83.159	166.5	2.45	2 6	+0.6	3 1.5	36
78.796	101.8	0.73	2n	0.2	60-Inch		83.158	165.8	2.44	2n	2.0	36-Inch	
The quadrant is frequently reversed.								HJ 3812			05 49.7 -59 50		
4349	STF 787			05 46.0 +21 19			84.795	192.0	2.63	2 7	+0.5	4 0.3	36
80.120	61.7	0.84	2 6	-0.2	3 0.3	26	84.798	192.5	2.65	1 7	+0.1	4 0.3	36
80.172	62.4	0.89	2 5	0.0	3 0.4	26	84.801	194.6	2.67	2 5	-0.1	4 0.3	36
85.080	60.0	0.83	2 7	-0.1	3 0.4	26							
81.791	61.4	0.85	3n	0.4	26-Inch		84.798	193.0	2.65	3n	0.3	36-Inch	
								HU 1395			05 50.1 -56 48		
							83.143	58.7	0.85	2 7	+0.6	3 0.8	36
							83.145	60.0	0.80	2 6	+0.7	3 0.7	36
							83.144	59.4	0.82	2n	0.8	36-Inch	
4371	BU 560			05 47.4 +29 39				BAL 47			05 50.4 -02 32		
86.063	130.4	1.64	2 5	-0.2	3 0.5	26							
87.114	130.8	1.51	2 7	0.0	3 0.3	26	83.159	71.3	3.57	2 4	+0.5	3 0.8	36
87.174	129.0	1.57	1 6	0.0	3 0.6	26	83.162	70.0	3.46	2 5	+0.6	3 0.4	36
87.177	129.6	1.42	2 6	-0.1	3 0.3	26							
86.882	130.0	1.54	4n	0.4	26-Inch		83.160	70.6	3.52	2n	0.6	36-Inch	

55

4442	BU 1188	05 50.7 -01 25	4488	A 2714	05 53.9 +06 33
77.106	94.4 1.19	2 5 0.0 3 3.0 26	78.932	145.3 0.65	2 5 0.0 3 0.0 26
77.108	95.1 1.18	2 7 +0.2 4 2.8 26	79.181	138.8 0.71	2 6 +0.3 3 0.0 26
77.133	94.8 1.23	2 6 0.0 4 3.0 26	79.203	137.4 0.55	2 3 +0.4 3 26
77.116	94.8 1.20	3n 2.9 26-Inch	79.206	140.4 0.66	2 6 +0.2 3 0.1 26
4422	A 1312	05 51.0 +56 22	79.130	140.5 0.64	4n 0.0 26-Inch
78.108	46.0 3.63	2 5 -0.1 3 1.0 26	4491	STT 123	05 54.1 +10 14
78.149	45.5 3.55	2 5 -0.1 3 1.4 26	78.932	185.7 2.28	1 5 0.0 3 1.7 26
78.128	45.8 3.59	2n 1.2 26-Inch	79.159	186.6 2.18	1 4 -0.3 3 1.8 26
4425	A 1313	05 51.2 +56 24	79.181	184.1 2.09	1 6 -0.3 3 1.8 26
78.127	136.6 0.63	2 5 0.0 3 0.6 26	79.091	185.5 2.18	3n 1.8 26-Inch
78.149	136.7 0.65	2 5 -0.1 3 0.6 26		RST 5503	05 54.8 -53 34
78.932	131.6 0.69	2 5 -0.5 3 0.7 26	83.148	73.4 0.14	2 8 +0.4 3 36
78.403	138.3 0.66	3n 0.6 26-Inch	83.151	66.3 0.19	2 7 +0.4 3 0.0 36
4458	A 2512	05 51.4 -11 38	83.150	69.8 0.16	2n 0.0 36-Inch
83.154	276.7 1.18	2 6 +0.3 3 1.5 36	4502	A 2658	05 55.0 +06 13
83.156	277.6 1.09	2 5 +0.2 3 1.7 36	79.181	79.8 0.41	2 6 -0.2 3 0.0 26
83.155	277.2 1.14	2n 1.6 36-Inch	79.203	81.3 0.43	2 6 +0.3 3 0.3 26
4437	HU 1113	05 52.4 +60 52	80.095	70.9 0.46	2 5 0.0 3 26
78.108	245.8 1.30	2 5 0.0 3 0.2 26	80.120	78.6 0.40	4 6 -0.1 3 0.2 26
78.127	242.5 1.31	2 5 0.0 3 0.1 26	79.650	77.6 0.42	4n 0.1 26-Inch
78.149	243.9 1.30	2 5 0.0 3 0.2 26	4479	HU 1114	05 55.8 +64 19
78.128	243.9 1.30	3n 0.2 26-Inch	78.108	88.2 1.17	2 5 0.0 3 0.3 26
	RST 4789	05 52.5 -15 51	78.127	87.8 1.23	2 5 +0.1 3 0.4 26
83.154	117.3 1.84	2 7 +0.4 3 0.3 36	78.149	85.4 1.24	2 5 0.0 3 0.3 26
83.156	118.2 1.67	2 5 +0.3 3 0.3 36	78.128	87.1 1.21	3n 0.3 26-Inch
83.155	117.8 1.76	2n 0.3 36-Inch	4505	STT 122	05 55.8 +36 56
	SLR 15	05 53.3 -61 50	78.097	255.0 0.20	2 7 0.0 3 26
83.143	143.3 0.25	2 7 +0.7 3 0.4 36	78.127	246.5 0.22	2 6 +0.1 3 0.7 26
83.145	144.5 0.26	2 7 +0.8 3 0.3 36	78.149	248.8 0.17	2 6 +0.1 3 0.7 26
83.144	143.9 0.26	2n 0.4 36-Inch	78.932	254.5 0.26	2 5 -0.3 3 0.5 26
Two quadrants have been described.			78.326	251.2 0.21	4n 0.6 26-Inch
	FIN 93	05 53.6 -56 40	Heintz, 1979: -10.2, 0.00.		
83.173	242.4 0.13	2 5 +0.6 2 0.2 60	4540	B 94	05 56.5 -26 31
83.176	234.9 0.14	2 7 +0.9 2 0.0 60	78.792	257.1 0.14	2 8 +0.1 1 0.3 60
83.184	226.9 0.14	2 6 +1.0 2 60	78.800	252.5 0.14	2 7 0.0 1 0.2 60
83.178	234.7 0.14	3n 0.1 60-Inch	78.796	254.8 0.14	2n 0.2 60-Inch
Rapid direct motion, but only three mea-			Closed in.		
sures, including the discovery one.					

4536	A 321			05 56.8 -03 04			HEI 47			06 01.1 +14 14			
78.792	137.1	0.69	2 8 -0.1 1 0.6 60	86.063	209.8	2.22	2 5 0.0 3	26					
78.800	137.4	0.69	2 6 -0.1 1 0.7 60	87.114	208.1	1.89	1 7 0.0 3	0.2 26					
				87.174	209.4	2.01	2 8 0.0 3	0.3 26					
78.796	137.2	0.69	2n 0.6 60-Inch	86.784	209.1	2.04	3n 0.2	26-Inch					
	HU 1570			05 58.1 -52 13									
83.143	326.5	0.76	2 7 +0.8 3 0.3 36		HU 1403			06 02.0 -48 56					
83.145	326.1	0.72	2 5 +0.8 3 0.2 36										
83.148	328.1	0.60	2 8 +0.4 3 0.0 36	83.148	91.2	1.22	2 8 +0.4 3	0.3 36					
				83.151	92.1	1.23	2 7 +0.4 3	0.2 36					
83.145	326.9	0.69	3n 0.2 36-Inch	83.150	91.6	1.22	2n 0.2	36-Inch					
Heintz, 1968: -4.7, +0.09.													
4530	A 1569			05 58.2 +55 55			4623	J 50			06 02.6 +08 01		
77.188	266.9	0.25	2 7 -0.1 4 0.9 26	79.181	236.7	0.56	2 6 -0.2 3	0.1 26					
78.064	265.2	0.19	2 5 0.0 3 0.6 26	79.203	240.3	0.48	2 7 +0.2 3	0.2 26					
78.083	263.8	0.22	2 5 0.0 3 0.7 26	80.095	238.7	0.53	2 5 -0.2 3	0.2 26					
77.778	265.3	0.22	3n 0.7 26-Inch	79.493	238.6	0.52	3n 0.2	26-Inch					
4562	STT 124			05 58.9 +12 49			4604	A 1315			06 03.1 +58 13		
77.106	297.5	0.51	2 5 +0.1 3 1.2 26										
77.108	299.8	0.41	2 7 +0.2 4 1.0 26	77.185	66.8	0.35	2 7 -0.1 3	0.1 26					
77.133	299.4	0.37	2 7 0.0 4 0.8 26	77.188	68.0	0.30	2 6 0.0 4	0.1 26					
77.185	298.1	0.43	2 7 -0.4 3 1.8 26	78.064	73.2	0.29	2 5 +0.1 3	0.2 26					
85.203	298.6	0.45	2 5 +0.1 3 0.8 26										
87.114	302.0	0.53	2 7 0.0 3 0.8 26	77.479	69.3	0.31	3n 0.1	26-Inch					
87.174	301.6	0.61	2 5 -0.1 3 1.4 26	Costa, Docobo, 1984: -3.6, +0.02.									
87.177	299.8	0.50	2 6 -0.2 3 1.0 26										
77.133	298.7	0.43	4n 1.2 26-Inch										
86.667	300.5	0.52	4n 1.0 26-Inch										
Baize, 1981: -2.1, +0.02; -2.6, +0.11.							RST 171			06 03.5 -55 13			
Starikova, 1985: -1.1, 0.00; -1.4, +0.08.							83.148	247.3	0.21	2 8 +0.5 3	36		
							83.151	251.0	0.22	2 6 +0.5 3	36		
4538	HU 1115			05 59.1 +61 08			83.150	249.2	0.22	2n	36-Inch		
77.188	282.2	0.22	2 7 0.0 4 0.2 26	Direct motion with decreasing separation.									
78.083	280.7	0.27	2 5 0.0 3 1.0 26										
78.932	286.1	0.24	2 5 -0.5 3 0.0 26										
78.068	283.0	0.24	3n 0.4 26-Inch										
							KUI 23			06 04.1 +23 16			
4575	A 2441			05 59.4 +13 45			75.884	188.1	0.20	2 6 0.0 3	0.5 26		
81.100	270.5	0.24	2 6 0.0 4 0.3 26	76.016	189.9	0.24	3 6 +0.1 3	0.8 26					
85.080	271.3	0.22	2 6 -0.1 3 0.2 26	76.966	192.6	0.24	3 5 0.0 4	1.2 26					
85.140	275.5	0.24	2 7 -0.1 4 0.2 26	77.106	198.8	0.24	1 5 0.0 3	0.0 26					
				77.108	200.2	0.24	1 7 +0.2 4	0.4 26					
83.773	272.4	0.23	3n 0.2 26-Inch	78.097	213.9	0.19	2 6 0.0 3	0.5 26					
				87.177	170.6	0.31	2 7 0.0 3	26					
	HU 1399 BC			06 00.4 -31 03			87.180	170.3	0.29	2 5 -0.2 3	0.3 26		
83.154	310.7	0.91	3 6 +0.7 3 1.2 36	87.194	175.8	0.30	1 6 -0.1 3	0.3 26					
83.162	314.8	0.92	2 6 +1.0 3 1.2 36	87.213	173.4	0.29	2 7 +0.1 3	0.3 26					
83.158	312.8	0.92	2n 1.2 36-Inch	76.616	193.9	0.23	5n 0.6	26-Inch					
				78.097	213.9	0.19	1n 0.5	26-Inch					
				87.191	172.5	0.30	4n 0.3	26-Inch					
Baize, 1952: -4.9, -0.01.				Heintz, 1985: +0.9, -0.01; +2.7, +0.02; +0.9, +0.04.									

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

57

4647	J 335	06 04.2 +11 01
79.181	281.2	1.31 2 6 -0.1 3 0.7 26
81.100	280.2	1.21 2 6 0.0 4 0.8 26
85.140	279.1	1.17 2 7 -0.1 4 0.8 26
85.162	282.9	0.90 2 6 -0.2 4 1.0 26
82.646	280.8	1.15 4n 0.8 26-Inch

4650	HU 827	06 04.8 +32 11
77.133	87.2	0.23 2 7 0.0 4 0.2 26
77.169	84.8	0.23 2 6 -0.1 4 0.0 26
77.185	86.8	0.28 2 7 -0.1 3 0.2 26
77.188	85.9	0.21 2 7 +0.1 4 0.2 26
77.169	86.2	0.24 4n 0.2 26-Inch

	FIN 387	06 05.0 -58 50
83.143	210.4	12.36 2 7 +0.8 3 4.0 36
83.151	207.2	11.83 2 7 +0.7 3 5.0 36
83.147	208.8	12.10 2n 4.5 36-Inch

This is the only measure.

4660	A 1951	06 05.2 +07 08
85.140	39.0	0.39 2 7 0.0 4 0.8 26
85.162	42.9	0.39 2 6 -0.1 4 0.7 26
85.179	37.0	0.41 2 5 -0.2 3 0.8 26
85.160	39.6	0.40 3n 0.8 26-Inch

4603	STT 121	06 05.3 +74 00
77.185	259.7	0.25 2 7 -0.3 3 1.0 26
77.188	250.1	0.18 2 6 0.0 4 1.0 26
78.064	252.3	0.20 2 5 0.0 3 1.0 26
77.479	254.0	0.21 3n 1.0 26-Inch

Heintz, 1978: +4.5, +0.01.

	HU 1572	06 06.3 -52 19
83.173	47.6	0.44 2 5 +0.5 2 0.4 60
83.176	47.4	0.45 2 7 +0.8 2 0.8 60
83.174	47.5	0.44 2n 0.6 60-Inch

4687	STF 840 BC	06 06.4 +10 45
85.080	133.9	0.33 2 7 0.0 3 0.3 26
85.140	128.5	0.36 2 7 +0.1 4 0.5 26
85.162	133.5	0.33 2 5 -0.1 4 0.3 26
85.127	132.0	0.34 3n 0.4 26-Inch

The pair has slowly closed in over the last 155 years, and angular motion is now becoming appreciable.

4699	A 504	06 06.8 -08 42
83.162	146.5	1.08 2 6 +0.5 3 0.5 36
83.184	146.1	0.95 2 5 +0.7 2 0.4 60
83.162	146.5	1.08 1n 0.5 36-Inch
83.184	146.1	0.95 1n 0.4 60-Inch

4691	STT 131	06 07.5 +36 16
87.180	282.7	1.48 2 5 -0.1 3 2.8 26
87.194	280.2	1.42 2 6 -0.1 3 2.5 26
87.207	283.7	1.32 2 4 0.0 3 3.0 26
87.194	282.2	1.41 3n 2.8 26-Inch

4712	A 1953	06 07.5 +07 54
85.179	67.8	0.30 2 5 -0.1 3 0.8 26
85.203	78.0	0.50 2 4 -0.2 3 0.7 26
87.114	85.6	0.31 2 7 0.0 3 0.5 26
87.177	63.2	0.26 2 6 0.0 3 26
86.168	73.6	0.34 4n 0.7 26-Inch

Difficult.

4730	STF 849	06 08.7 +17 24
80.095	243.6	0.99 2 5 -0.1 3 0.6 26
80.120	243.0	1.01 2 7 -0.2 3 0.5 26
80.172	241.2	1.07 2 4 -0.2 3 0.4 26
80.129	242.6	1.02 3n 0.5 26-Inch

	HU 1573	06 08.9 -52 08
83.143	155.9	0.21 2 7 +0.9 3 0.6 36
83.145	166.5	0.21 2 6 +0.8 3 0.8 36
83.148	158.9	0.24 2 8 +0.6 3 0.2 36
83.145	160.4	0.22 3n 0.5 36-Inch

Apparently more than a revolution has been observed, but with poor coverage.

4750	A 54	06 09.8 +29 14
77.185	337.2	0.47 1 6 -0.1 3 1.2 26
77.188	337.6	0.51 4 7 +0.1 4 1.3 26
78.083	341.7	0.43 2 5 +0.1 3 1.5 26
77.485	338.8	0.47 3n 1.3 26-Inch

4752	A 2514	06 09.8 +16 30
80.120	88.5	0.24 2 7 -0.2 3 0.3 26
81.100	92.8	0.25 2 6 0.0 4 0.2 26
85.080	91.3	0.22 2 7 -0.1 3 0.0 26
85.140	92.1	0.28 2 6 +0.1 4 0.0 26
82.860	91.2	0.25 4n 0.1 26-Inch

Quadrant uncertain. Either a half or a whole revolution has occurred since discovery.

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

	FIN 18		06 10.4 -39 38	4833	A 2515	06 14.0 +12 16
83.173	42.3	1.41	2 5 +0.5 2 0.3 60	77.133	14.2	0.40 1 6 0.0 4 0.4 26
83.176	40.9	1.31	2 8 +0.8 2 0.2 60	77.169	19.1	0.34 2 6 -0.1 4 0.2 26
				77.185	14.0	0.36 1 6 -0.1 3 0.2 26
83.174	41.6	1.36	2n 0.2 60-Inch	77.188	19.2	0.33 1 7 +0.1 4 0.1 26
				85.080	13.8	0.39 2 7 0.0 3 0.3 26
4754	A 1572		06 10.9 +53 30	85.140	12.7	0.33 1 6 +0.1 4 0.4 26
78.083	105.8	0.94	2 5 0.0 3 0.7 26	85.162	10.2	0.35 1 5 0.0 4 0.2 26
78.108	104.1	0.94	2 5 -0.2 3 0.8 26	77.169	16.6	0.36 4n 0.2 26-Inch
78.127	104.0	0.98	2 5 +0.1 3 1.0 26	85.127	12.2	0.36 3n 0.3 26-Inch
78.106	104.6	0.95	3n 0.8 26-Inch	4847	A 3025	06 14.3 -17 29
				83.159	117.3	0.62 2 5 +0.4 3 1.0 36
	FIN 96		06 11.1 -58 18	83.162	121.5	0.79 2 5 +0.5 3 0.7 36
83.143	41.7	2.10	2 7 +1.0 3 1.5 36	83.160	119.4	0.70 2n 0.8 36-Inch
83.145	39.4	2.08	2 6 +0.8 3 1.6 36			Closing in.
83.144	40.6	2.09	2n 1.6 36-Inch		KUI 24	06 14.4 +17 54
				80.095	140.6	0.55 2 6 -0.2 3 0.1 26
4797	A 3022		06 11.5 -16 49	81.100	135.9	0.47 2 6 -0.1 4 0.0 26
83.156	1.5	1.13	2 5 +0.3 3 0.2 36	85.140	138.9	0.46 2 7 +0.2 4 0.0 26
83.159	1.3	0.99	2 6 +0.4 3 0.0 36	82.112	138.5	0.49 3n 0.0 26-Inch
83.158	1.4	1.06	2n 0.1 36-Inch		RST 4803	06 14.8 -36 57
				83.173	98.6	0.34 2 6 +0.6 2 0.2 60
4786	A 55		06 11.6 +28 46	83.176	96.0	0.35 2 8 +0.8 2 0.4 60
77.106	277.7	0.41	2 5 +0.1 3 0.3 26	83.174	97.3	0.34 2n 0.3 60-Inch
77.108	275.0	0.35	2 7 +0.2 4 0.5 26			
77.133	277.7	0.41	2 7 +0.2 4 0.7 26	4856	A 2717	06 15.2 +06 31
77.116	276.8	0.39	3n 0.5 26-Inch	78.149	351.0	0.40 1 5 0.0 3 0.2 26
				79.159	348.4	0.35 1 4 -0.3 3 0.2 26
4817	B 104		06 12.3 -25 14	79.181	350.0	0.43 1 7 -0.2 3 0.2 26
83.154	183.7	0.99	2 6 +0.6 3 0.8 36	78.830	349.8	0.39 3n 0.2 26-Inch
83.156	185.5	1.08	2 5 +0.3 3 0.8 36			
83.155	184.6	1.04	2n 0.8 36-Inch	4871	B 109	06 15.3 -24 32
				83.154	284.1	1.27 2 5 +0.7 3 0.6 36
	RST 4295		06 13.0 -02 38	83.156	282.7	1.31 2 5 +0.4 3 0.8 36
80.120	290.9	0.29	2 5 -0.1 3 0.4 26	83.155	283.4	1.29 2n 0.7 36-Inch
85.162	289.7	0.29	2 5 -0.1 4 0.4 26			
85.179	289.8	0.35	2 5 0.0 3 0.5 26		RST 5225	06 15.9 +01 10
83.487	290.1	0.31	3n 0.4 26-Inch	76.966	179.8	0.22 1 5 0.0 4 0.0 26
				77.108	180.4	0.22 1 6 +0.2 4 0.0 26
4823	HO 22		06 13.4 +10 14	77.133	182.9	0.15 1 6 +0.1 4 0.0 26
85.203	207.6	0.86	2 4 +0.1 3 0.3 26	77.185	175.0	0.17 1 6 -0.1 3 0.0 26
85.214	206.5	0.96	2 5 +0.1 3 0.2 26	77.098	179.5	0.19 4n 0.0 26-Inch
87.114	207.9	0.84	2 7 0.0 3 0.2 26			
87.177	208.2	0.96	2 6 -0.1 3 0.2 26		Heintz, 1975:	-4.5, -0.01.
86.177	207.6	0.90	4n 0.2 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

59

B 2108						06 16.5 -43 38						4950	STF 881						06 22.1 +59 22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
83.148	97.2	0.24	2 7	+0.6 3	36							77.207	133.0	0.56	3 4	-0.1 3	1.4 26																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

5016	A 2356		06 25.0 +42 33	5051	J 260		06 25.7 +07 45
80.095	82.2	0.86	2 6 -0.2 3 0.2 26	79.181	180.0	1.60	1 6 -0.1 3 1.0 26
81.095	83.0	0.91	2 5 0.0 3 0.2 26	79.206	181.3	1.67	1 5 +0.1 3 2.0 26
81.100	84.4	0.91	2 6 -0.2 4 0.1 26	79.219	182.0	1.63	1 5 +0.1 3 2.0 26
80.763	83.2	0.89	3n 0.2 26-Inch	79.202	181.1	1.63	3n 1.7 26-Inch
5045	A 324		06 25.1 -04 26		HU 1411		06 25.7 -55 10
76.966	175.2	1.20	1 5 0.0 4 0.1 26	83.151	117.9	0.42	2 5 +0.7 3 0.3 36
77.133	175.7	1.07	1 6 0.0 4 0.0 26	83.154	111.5	0.44	2 5 +0.9 3 0.5 36
77.169	177.1	1.09	1 7 -0.1 3 0.2 26				
77.089	176.0	1.12	3n 0.1 26-Inch	83.152	114.7	0.43	2n 0.4 36-Inch
5044	A 2669		06 25.2 +03 00	5053	A 2723		06 25.8 +07 47
75.172	252.5	0.26	2 7 0.0 3 1.0 26	79.181	22.3	0.83	1 6 0.0 3 0.6 26
75.175	256.1	0.25	3 7 -0.2 4 1.4 26	79.206	23.7	0.68	1 5 +0.2 3 0.8 26
77.133	261.0	0.26	2 7 0.0 4 1.2 26	79.219	24.8	0.78	2 5 +0.2 3 0.8 26
77.185	265.2	0.29	2 6 -0.2 3 1.2 26	79.202	23.6	0.76	3n 0.7 26-Inch
77.188	256.6	0.23	3 6 0.0 4 1.4 26				
76.371	258.3	0.26	5n 1.2 26-Inch	5069	STF 910 BC		06 26.7 +00 27
5048	BU 569		06 25.2 -10 56	85.080	147.6	0.35	2 7 0.0 4 0.5 26
83.170	118.4	1.87	2 3 +0.3 2 2.8 60	85.140	143.0	0.38	2 7 0.0 4 0.6 26
83.176	114.7	1.74	2 8 +1.0 2 2.5 60	85.162	142.6	0.39	2 5 0.0 4 0.4 26
83.184	116.4	1.86	2 6 +0.8 2 2.5 60	85.127	144.4	0.37	3n 0.5 26-Inch
83.177	116.5	1.82	3n 2.6 60-Inch		FIN 98		06 26.8 -58 14
5043	A 2812		06 25.3 +08 01	83.143	336.3	0.15	2 7 +0.8 3 36
77.169	0.5	0.47	1 5 -0.1 4 0.6 26	83.145	335.2	0.20	2 5 +0.8 3 36
77.185	7.7	0.53	1 5 0.0 3 0.2 26	83.144	335.8	0.18	2n 36-Inch
77.188	7.7	0.55	1 7 +0.1 4 0.2 26	5092	B 114		06 27.4 -25 45
77.181	5.3	0.52	3n 0.3 26-Inch	83.173	275.9	0.28	2 7 +0.7 2 0.2 60
	FIN 343		06 25.3 +01 30	83.184	279.7	0.35	2 6 +0.7 2 0.2 60
85.080	2.9	0.20	4 7 0.0 4 26	83.178	277.8	0.32	2n 0.2 60-Inch
85.140	356.1	0.20	2 7 0.0 4 0.0 26	Heintz, 1979: -1.2, +0.02.			
85.162	1.1	0.24	2 5 0.0 4 0.0 26	5078	A 1732		06 28.8 +52 26
87.114	351.4	0.20	1 7 -0.1 1 26	78.064	15.8	3.79	1 5 0.0 3 3.5 26
85.624	357.9	0.21	4n 0.0 26-Inch	78.083	10.6	3.81	2 5 0.0 3 3.5 26
Atmospheric dispersion makes pairs of this nature difficult.				78.097	15.2	3.52	2 7 0.0 3 3.2 26
				78.081	13.9	3.71	3n 3.4 26-Inch
5032	HU 831		06 25.4 +35 44		FIN 99		06 29.5 -54 25
78.127	282.1	0.29	2 5 +0.1 3 0.2 26	83.143	169.3	1.39	2 7 +0.8 3 1.2 36
78.149	279.0	0.22	2 5 0.0 3 0.0 26	83.145	170.0	1.32	2 5 +0.9 3 1.6 36
79.181	288.4	0.24	2 6 0.0 3 0.1 26	83.144	169.6	1.36	2n 1.4 36-Inch
78.486	283.2	0.25	3n 0.1 26-Inch				

61

R 65 AB					06 29.9 -50 14					WOR 6					06 32.3 +52 25				
80.249	278.8	0.51	2 8	+0.8 3 0.2 36						78.064	115.1	0.51	2 5	0.0 3 0.0 26					
80.251	279.2	0.63	2 5	+0.8 3 0.4 36						78.083	114.8	0.57	2 5	0.0 3 0.2 26					
80.254	278.6	0.54	2 6	+0.6 3 0.3 36						78.097	115.8	0.55	2 7	0.0 3 26					
80.257	279.2	0.58	2 6	+0.8 3 0.2 36						78.149	114.7	0.51	2 5	0.0 3 0.2 26					
83.143	275.9	0.65	2 8	+1.0 3 36															
83.145	278.5	0.66	2 6	+1.1 3 0.2 36						78.098	115.1	0.54	4n	0.1 26-Inch					
83.148	277.2	0.65	2 7	+0.8 3 0.2 36						Baize, 1986: +7.7, +0.09.									
80.253	279.0	0.56	4n	0.3 36-Inch															
83.145	277.2	0.65	3n	0.2 36-Inch															
Heintz, 1978: +2.0, -0.08; +2.1, -0.06.										BU 98					06 32.7 -05 20				
HDO 195 CD										83.170	150.2	0.67	2 3	+0.3 2 60					
80.249	190.2	0.42	2 8	+0.9 3 0.2 36						83.173	152.4	0.74	2 6	+0.7 2 0.2 60					
80.251	192.1	0.46	2 4	+0.9 3 0.2 36						83.172	151.3	0.70	2n	0.2 60-Inch					
80.254	189.6	0.43	2 5	+0.7 3 0.2 36						5197 STF 932 06 34.3 +14 44									
80.257	189.5	0.40	2 6	+0.9 3 0.2 36						77.207	316.6	1.77	2 4	-0.1 3 0.2 26					
83.143	201.7	0.46	2 7	+1.2 3 0.2 36						78.064	314.9	1.90	2 6	+0.2 3 0.1 26					
83.145	204.4	0.40	2 7	+1.2 3 36						78.083	315.3	1.85	2 5	0.0 3 0.0 26					
83.148	203.1	0.45	2 8	+0.9 3 0.2 36						77.785	315.6	1.84	3n	0.1 26-Inch					
80.253	190.4	0.43	4n	0.2 36-Inch						Hopmann, 1960: +3.6, +0.06.									
83.145	203.1	0.44	3n	0.2 36-Inch															
Heintz, 1968: +1.1, -0.04; +3.1, -0.01.																			
5121	STT 141		06	30.0 +17 54						5212	HO 234		06	34.5 -11 14					
77.185	143.4	2.22	2 6	-0.1 3 1.8 26						80.243	329.8	0.41	2 6	+0.6 3 0.3 36					
77.207	143.4	2.32	4 4	-0.1 3 2.0 26						80.246	328.6	0.35	3 5	+0.7 3 0.2 36					
78.064	142.9	2.20	2 6	+0.1 3 1.3 26						80.249	327.5	0.33	2 8	+0.6 3 0.2 36					
78.127	143.3	2.21	2 5	+0.1 3 2.2 26						83.170	333.2	0.37	2 4	+0.4 2 60					
77.646	143.2	2.24	4n	1.8 26-Inch						83.173	336.7	0.35	2 6	+0.8 2 0.3 60					
										83.176	333.7	0.39	1 8	+0.9 2 0.2 60					
5158	A 2017		06	31.8 +31 31						80.244	328.6	0.36	3n	0.2 36-Inch					
77.133	261.7	0.19	4 6	0.0 4 0.0 26						83.173	334.5	0.37	3n	0.2 60-Inch					
77.169	270.2	0.20	2 6	-0.1 3 0.0 26						Heintz, 1979: +0.3, -0.02; +1.5, -0.02.									
77.185	274.9	0.17	2 7	0.0 4 0.0 26															
77.188	263.4	0.19	2 7	0.0 4 0.0 26						BU 754 06 34.7 -34 01									
87.194	79.9	0.20	2 6	0.0 3 0.0 26						80.224	48.2	1.03	2 8	+0.7 3 0.2 60					
87.213	76.9	0.22	2 5	0.0 3 26						80.227	48.4	0.99	2 7	+0.5 3 0.3 60					
87.224	58.6	0.19	2 7	+0.1 3 0.0 26						80.226	48.3	1.01	2n	0.2 60-Inch					
77.169	267.6	0.19	4n	0.0 26-Inch															
87.210	71.8	0.20	3n	0.0 26-Inch															
Baize, 1958: +6.8, 0.00; -6.8, +0.05.																			
5155	A 2117		06	31.8 +31 31						5203	HU 1242		06	35.2 +34 56					
81.100	50.4	1.54	2 6	0.0 4 0.8 26						75.175	120.4	0.93	1 7	0.0 4 2.8 26					
85.162	52.6	1.45	2 5	0.0 4 1.0 26						75.208	118.5	0.88	3 7	+0.2 3 1.8 26					
85.179	48.7	1.49	2 5	-0.1 3 1.2 26						77.169	122.9	1.07	3 7	-0.1 3 2.4 26					
83.814	50.6	1.49	3n	1.0 26-Inch						75.851	120.6	0.96	3n	2.3 26-Inch					

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

	FIN 19		06 35.9 -36 05	5273	A 2822		06 37.9 +08 56
80.224	359.2	0.18	2 8 +0.5 3 0.0 60	75.884	122.7	0.73	2 6 +0.1 3 0.1 26
80.227	5.4	0.17	2 7 +0.6 3 0.5 60	76.966	120.9	0.70	2 5 +0.1 4 0.0 26
80.230	5.2	0.18	2 5 +0.4 3 0.4 60	77.169	125.4	0.71	2 6 0.0 3 0.2 26
83.151	354.7	0.29	2 7 +0.7 3 0.4 36				
83.154	354.4	0.23	2 5 +0.9 3 0.2 36	76.673	123.0	0.71	3n 0.1 26-Inch
83.162	353.3	0.28	2 5 +0.7 3 0.4 36				
80.227	3.3	0.18	3n 0.4 60-Inch		I 5		06 38.0 -61 32
83.156	354.1	0.27	3n 0.3 36-Inch	80.240	269.0	1.57	2 8 +0.7 3 1.8 36
Finsen, 1977: +5.1, -0.01; +5.5, +0.01.				80.243	269.6	1.37	4 6 +0.6 3 2.5 36
				80.254	271.2	1.36	2 5 +0.7 3 2.8 36
5231	HO 341		06 36.1 +13 41	80.246	269.9	1.43	3n 2.4 36-Inch
87.114	127.2	2.09	2 8 -0.2 3 5.0 26				
87.177	132.2	2.61	2 6 -0.2 3 3.5 26	5271	A 2452		06 38.1 +19 53
87.194	132.5	2.18	2 7 0.0 3 4.0 26	76.966	90.9	0.89	2 6 0.0 4 0.1 26
87.162	130.6	2.29	3n 4.2 26-Inch	77.185	92.9	0.85	2 6 0.0 4 0.1 26
	RST 4816		06 36.2 -36 08	77.188	93.5	0.87	2 7 +0.1 4 0.1 26
83.151	141.7	0.18	2 7 +0.8 3 0.0 36	77.113	92.4	0.87	3n 0.1 26-Inch
83.162	144.1	0.18	2 5 +0.8 3 36				
83.156	142.9	0.18	2n 0.0 36-Inch	5290	STH		06 39.2 +09 39
The pair is in rapid motion, but needs annual observation to elicit the nature of the motion.				77.185	282.8	0.70	2 7 +0.1 4 0.2 26
				77.188	283.8	0.72	2 7 0.0 4 0.3 26
				77.207	284.1	0.60	2 4 -0.1 3 0.0 26
				77.193	283.4	0.67	3n 0.2 26-Inch
5234	STT 149		06 36.5 +27 17				
78.083	337.6	0.39	2 5 +0.1 3 2.4 26	5276	STF 936		06 39.8 +58 06
78.097	340.0	0.46	1 6 0.0 3 1.5 26	79.181	277.0	1.29	2 6 0.0 3 1.3 26
78.127	340.1	0.41	2 6 +0.1 3 1.4 26	79.219	277.4	1.25	2 5 +0.1 3 1.3 26
85.080	324.0	0.49	2 7 0.0 4 1.7 26	80.095	272.8	1.21	2 5 -0.3 3 1.5 26
85.140	318.4	0.58	2 6 0.0 4 1.4 26	79.498	275.7	1.25	3n 1.4 26-Inch
85.162	325.3	0.52	2 5 0.0 4 1.8 26				
78.102	339.2	0.42	3n 1.8 26-Inch				
85.127	322.6	0.54	3n 1.6 26-Inch	5332	A 218		06 41.8 +30 41
Heintz, 1967: +11.7, -0.16; +7.1, -0.08.				87.114	78.4	0.17	2 8 -0.1 3 26
Scardia, 1982: + 7.2, -0.13; +2.3, -0.05.				87.194	64.3	0.26	2 7 0.0 3 0.0 26
5244	A 2119		06 36.7 +21 39	87.213	70.4	0.24	2 6 -0.1 3 26
76.966	267.6	0.34	2 6 -0.1 4 0.1 26	87.224	58.4	0.22	2 7 0.0 3 26
77.169	269.7	0.33	2 7 -0.1 3 0.1 26	87.186	67.9	0.22	4n 0.0 26-Inch
77.185	269.3	0.35	2 6 0.0 4 0.2 26	Heintz, 1965: +44.0, +0.09.			
77.107	268.9	0.34	3n 0.1 26-Inch	The orbit fails. Confirmed by recent speckle.			
	RST 4819		06 37.3 -36 59		I 180		06 44.8 -52 25
83.151	6.4	0.58	2 7 +0.9 3 0.7 36	83.148	340.1	0.67	2 8 +0.8 3 0.5 36
83.154	7.5	0.61	2 4 +1.0 3 1.4 36	83.151	340.9	0.62	2 5 +0.5 3 0.7 36
83.152	7.0	0.60	2n 1.0 36-Inch	83.150	340.5	0.64	2n 0.6 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

63

5402	A 219	06 45.0 +30 06	5455	STT 157	06 47.7 +00 20
81.100	318.9	2.41 2 6 0.0 4 0.5 26	78.943	225.7	0.28 2 4 +0.4 3 0.0 26
85.140	318.4	2.26 2 7 +0.1 4 0.2 26	79.181	215.4	0.29 2 5 +0.2 3 0.3 26
85.162	321.7	2.25 2 5 +0.2 4 0.8 26	79.206	221.8	0.29 3 5 -0.1 3 0.4 26
83.801	319.7	2.31 3n 0.5 26-Inch	79.219	218.3	0.27 2 5 +0.2 3 26
			79.137	220.3	0.28 4n 0.2 26-Inch
5401	A 2522	06 45.1 +35 55	Heintz, 1973: 0.0, -0.06.		
81.100	251.8	0.71 2 5 -0.1 4 0.1 26			
85.140	251.0	0.63 2 6 0.0 4 0.1 26			
85.179	249.8	0.68 2 5 -0.3 3 0.2 26			
83.806	250.9	0.67 3n 0.1 26-Inch			
5400	STF 948	06 46.2 +59 27	5473	A 3038 BC	06 48.3 -15 20
78.097	84.7	1.77 2 7 0.0 3 0.3 26	83.176	314.2	0.12 2 8 +0.9 2 60
78.127	83.3	1.74 2 6 0.0 3 0.5 26	83.184	325.3	0.12 2 6 +0.5 2 60
78.149	84.0	1.85 2 6 -0.2 3 0.3 26	83.180	319.8	0.12 2n 60-Inch
85.162	81.3	1.77 2 6 0.0 4 0.2 26	Closed in with little angular change.		
85.179	81.4	1.77 2 7 -0.2 3 0.2 26			
85.203	81.4	1.73 2 5 -0.4 3 0.7 26			
78.124	84.0	1.79 3n 0.4 26-Inch	5477	A 2935	06 48.5 -12 27
85.181	81.4	1.76 3n 0.4 26-Inch	83.170	122.2	0.18 2 4 +0.5 2 0.0 60
Brosche, 1957: +4.2, +0.10; +5.2, +0.07.			83.173	116.1	0.17 2 5 +0.8 2 60
			83.184	120.3	0.18 2 6 +0.6 2 0.1 60
5429	HO 238	06 46.3 +18 12	83.176	119.5	0.18 3n 0.0 60-Inch
79.181	356.0	0.36 2 5 0.0 3 0.1 26			
79.206	353.0	0.38 2 5 -0.1 3 0.0 26			
79.219	354.9	0.34 2 5 +0.2 3 0.0 26	5505	BU 897	06 50.8 -00 33
87.114	175.3	0.43 1 7 0.0 3 0.3 26	87.177	25.5	6.45 2 6 -0.1 3 5.0 26
87.177	173.2	0.34 1 6 -0.1 3 0.0 26	87.213	23.5	6.23 4 5 -0.1 3 6.0 26
87.194	175.9	0.36 2 7 0.0 3 0.0 26	87.224	20.7	6.29 1 7 +0.1 3 5.0 26
87.213	177.2	0.39 2 5 -0.1 3 0.0 26	87.205	23.2	6.32 3n 5.3 26-Inch
87.224	180.1	0.38 2 7 +0.1 3 0.2 26			
79.202	354.6	0.36 3n 0.0 26-Inch			
87.184	176.3	0.38 5n 0.1 26-Inch			
Quadrant in doubt.					
5442	STN 15	06 46.3 -20 45	5519	A 1956	06 51.5 +03 58
83.170	142.7	2.69 2 4 +0.3 2 0.2 60	77.108	233.5	0.29 3 7 0.0 4 1.4 26
83.173	141.4	2.49 2 7 +0.7 2 0.1 60	77.169	230.8	0.27 3 7 -0.1 3 1.0 26
83.184	139.6	2.56 2 5 +0.9 2 0.2 60	77.188	235.1	0.29 1 6 0.0 4 1.5 26
83.176	141.2	2.58 3n 0.2 60-Inch	77.155	233.1	0.28 3n 1.3 26-Inch
5447	STT 156	06 47.4 +18 12			
74.198	252.5	0.59 2 5 +0.1 3 0.2 26	5535	A 513	06 52.7 +24 58
77.207	250.5	0.40 2 5 0.0 3 0.5 26	78.083	238.9	0.44 2 5 0.0 3 0.0 26
78.064	250.7	0.40 2 6 0.0 3 0.5 26	78.127	246.7	0.39 2 5 +0.2 3 0.2 26
78.083	249.4	0.37 2 5 0.0 3 0.2 26	78.149	242.8	0.37 2 5 -0.1 3 0.2 26
78.127	249.8	0.41 2 5 +0.2 3 0.0 26	85.179	223.1	0.36 2 6 0.0 3 0.3 26
79.181	245.3	0.39 2 6 +0.1 3 0.2 26	85.203	226.5	0.38 2 5 0.0 3 0.3 26
77.136	250.6	0.43 5n 0.3 26-Inch	85.214	220.3	0.31 2 5 -0.1 3 0.2 26
79.181	245.3	0.39 1n 0.2 26-Inch	78.120	242.8	0.40 3n 0.1 26-Inch
Domanget, 1953: +6.3, -0.11; -2.6, -0.15.			85.199	223.3	0.35 3n 0.3 26-Inch
			Heintz, 1963: +6.0, -0.10; +6.3, -0.17.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

5514	STF 963		06 53.1 +59 27	5581	HU 617		06 56.7 +50 00
78.149	250.1	0.23	2 6 -0.3 3 0.7 26	76.016	211.4	1.09	2 5 0.0 3 0.2 26
79.181	251.2	0.30	2 5 -0.3 3 0.5 26	77.108	214.3	0.99	1 7 +0.1 4 0.0 26
79.206	258.7	0.25	2 5 0.0 3 0.6 26	77.133	213.3	0.97	2 6 -0.1 3 0.2 26
79.221	250.4	0.29	2 5 0.0 3 0.8 26				
85.179	259.6	0.25	2 6 -0.3 3 0.7 26	76.752	213.0	1.02	3n 0.1 26-Inch
85.203	258.9	0.26	2 4 -0.4 3 0.8 26				
85.214	269.2	0.29	2 5 -0.2 3 0.5 26				
85.233	264.2	0.31	2 7 0.0 3 0.7 26	5626	I 432		06 56.9 -28 42
78.939	252.6	0.27	4n 0.6 26-Inch	83.170	198.7	1.03	2 5 +0.5 2 0.2 60
85.207	263.0	0.28	4n 0.7 26-Inch	83.178	199.6	1.01	2 4 +0.9 2 0.3 60
				83.184	200.3	1.10	2 5 +0.8 2 0.2 60
Heintz, 1984: +0.2, -0.07; +0.4, -0.04. An orbit by Docobo, Costa gives worse residuals.				83.177	100.5	1.05	3n 0.2 60-Inch
				5586	STT 159		06 57.3 +58 25
5557	STF 987		06 54.1 -05 51	77.133	41.7	0.67	1 7 0.0 3 0.6 26
				77.169	39.6	0.72	2 7 0.0 3 0.8 26
80.246	175.0	1.34	1 4 +0.5 3 0.2 36	77.185	40.2	0.62	1 6 0.0 4 1.0 26
80.249	173.9	1.34	1 8 +0.6 3 0.2 36	77.188	43.8	0.73	4 6 0.0 4 0.5 26
80.251	174.4	1.35	1 5 +0.7 3 0.2 36				
				77.169	41.3	0.68	4n 0.7 26-Inch
80.249	174.4	1.34	3n 0.2 36-Inch				
					I 65		06 57.3 -35 30
	FIN 100		06 54.2 -62 28	80.224	155.4	0.22	2 8 +0.5 3 60
80.240	70.0	0.15	2 8 +0.6 3 0.0 36	80.227	149.4	0.24	2 7 +0.4 3 0.4 60
80.243	68.2	0.16	2 6 +0.5 3 0.0 36	80.230	149.3	0.24	2 5 +0.4 3 0.4 60
				83.151	178.3	0.29	2 7 +1.0 3 36
80.242	69.1	0.16	2n 0.0 36-Inch	83.154	172.5	0.27	2 8 +0.8 3 36
No other measures besides the discovery one in 1929. Substantial angular decrease.				80.227	151.4	0.23	3n 0.4 60-Inch
				83.152	175.4	0.28	2n 36-Inch
				Finsen, 1963: +4.3, -0.02; -1.6, +0.02.			
5553	STT 160		06 54.4 +21 10				
					LPM 248		06 57.9 -44 17
87.114	188.0	1.36	1 7 -0.1 3 3.0 26				
87.177	195.0	1.22	1 6 0.0 3 3.0 26	83.143	16.7	2.05	2 7 +1.0 3 0.1 36
87.194	187.4	1.22	1 7 0.0 3 3.0 26	83.145	17.8	2.00	2 7 +1.0 3 0.2 36
87.213	194.6	1.30	2 6 0.0 3 3.0 26	83.148	16.4	1.99	2 8 +0.7 3 0.1 36
87.174	191.2	1.28	4n 3.0 26-Inch	83.145	17.0	2.01	3n 0.1 36-Inch
				This pair of M-dwarfs shows considerable decrease in angle and separation.			
	B 706		06 54.6 -27 34				
83.170	280.2	0.65	2 4 +0.5 2 60	5647	A 1061		06 59.3 +25 14
83.173	282.2	0.54	2 6 +0.6 2 0.3 60				
83.178	284.0	0.61	2 4 +0.8 2 0.3 60	76.966	25.9	0.17	3 6 -0.1 4 0.0 26
				77.169	23.6	0.18	2 7 0.0 3 0.2 26
83.174	282.1	0.60	3n 0.3 60-Inch	77.188	24.8	0.17	3 6 +0.1 4 0.2 26
Dommanget, 1979: +0.3, -0.14.				77.108	24.8	0.17	3n 0.0 26-Inch
	FIN 20		06 55.1 -38 34	5671	BU 1022		07 00.7 +27 16
83.148	290.9	1.77	2 8 +0.9 3 3.5 36				
83.151	289.6	1.85	2 7 +0.9 3 2.8 36	77.133	81.7	0.28	2 8 +0.1 3 0.1 26
				77.169	81.9	0.24	2 7 +0.1 3 0.0 26
83.150	290.2	1.81	2n 3.2 36-Inch	77.185	80.9	0.35	2 5 +0.1 4 0.0 26
Increase in separation.				77.162	81.5	0.29	3n 0.0 26-Inch

65

5695	STF 1011		07 00.8 -15 19		5710	ES 289		07 02.8 +38 56
80.246	299.6	4.29	2 5 +0.5 3 0.4 36		78.149	101.6	1.97	2 6 0.0 3 0.2 26
80.251	297.8	4.28	2 5 +0.7 3 0.8 36		78.943	100.1	2.10	2 4 +0.3 3 0.4 26
80.254	299.2	4.29	2 7 +0.5 3 0.8 36		79.206	102.5	1.97	2 6 0.0 3 0.0 26
80.250	298.9	4.29	3n 0.7 36-Inch		78.766	101.4	2.01	3n 0.2 26-Inch
	COU 948		07 01.0 +26 15					
87.114	247.0	0.88	2 7 0.0 3 0.5 26		5717	A 1958		07 03.0 +38 37
87.194	247.4	0.93	2 7 0.0 3 0.4 26		76.016	164.4	0.62	2 5 0.0 3 0.5 26
87.213	248.1	1.00	4 5 0.0 3 0.5 26		76.966	161.1	0.61	2 6 -0.1 4 0.8 26
87.174	247.5	0.94	3n 0.5 26-Inch		77.108	161.1	0.56	4 7 +0.2 4 1.2 26
					76.697	162.2	0.60	3n 0.8 26-Inch
5703	A 671		07 01.3 -09 06					
80.254	60.0	0.19	2 7 +0.6 3 0.0 36					
80.257	60.7	0.21	2 6 +0.4 3 0.0 36					
83.176	54.0	0.17	2 8 +0.7 2 0.2 60			DUN 39		07 03.2 -59 11
83.184	52.4	0.16	2 6 +0.5 2 0.4 60		80.227	85.5	1.58	2 8 +0.4 3 0.7 60
80.256	60.4	0.20	2n 0.0 36-Inch		80.230	85.2	1.56	2 4 +0.1 3 0.8 60
83.180	53.2	0.16	2n 0.3 60-Inch		80.232	89.0	1.60	2 7 0.0 3 1.2 60
One quadrant has been described.					80.230	86.6	1.58	3n 0.9 60-Inch
5712	BU 573		07 01.8 -10 53					
81.100	290.1	1.03	2 5 -0.2 4 0.5 26		5726	A 1959		07 03.6 +39 40
83.156	295.5	0.91	2 5 +0.2 3 0.4 36		72.851	337.2	0.24	2 6 0.0 3 0.0 26
83.162	294.5	0.87	2 5 +0.7 3 0.4 36		74.975	356.1	0.24	2 6 0.0 3 0.0 26
85.179	298.3	0.83	2 5 -0.1 3 0.5 26		75.175	356.5	0.25	2 6 +0.1 4 0.0 26
85.203	294.9	0.82	2 5 0.0 3 0.3 26		75.208	345.7	0.25	3 7 +0.1 3 0.1 26
83.159	295.0	0.89	2n 0.4 36-Inch		76.966	2.3	0.23	2 6 0.0 4 0.0 26
83.827	294.4	0.89	3n 0.4 26-Inch		77.108	7.7	0.23	2 7 0.0 4 0.0 26
					79.206	17.1	0.15	2 7 +0.1 3 0.0 26
5713	HU 112		07 01.8 -11 19		72.851	337.2	0.24	1n 0.0 26-Inch
83.156	193.2	0.57	2 5 +0.3 3 0.5 36		75.119	352.8	0.25	3n 0.0 26-Inch
83.162	192.5	0.60	2 5 +0.8 3 0.6 36		77.037	5.0	0.23	2n 0.0 26-Inch
83.159	192.8	0.58	2n 0.6 36-Inch		79.206	17.1	0.15	1n 0.0 26-Inch
					Couteau, 1987: + 7.1, -0.01; +10.5, 0.00; +23.0, 0.00; + 4.4; -0.03.			
	KUI 28		07 01.9 -01 21		Morel's and Costa, Docobo's orbits not only fail to represent the motion, but actually predict motion in the opposite direction!			
85.179	251.0	24.59	2 6 0.0 3 3.2 26					
85.203	249.6	24.26	2 5 -0.1 3 4.0 26					
85.214	249.9	24.40	2 5 -0.1 3 3.0 26					
85.199	250.2	24.42	3n 3.4 26-Inch			J 1828		07 04.0 -09 13
van den Bos made the only other measure in 1958. A physical pair.					80.251	171.2	5.51	1 5 +0.9 3 0.6 36
					80.254	171.2	5.57	1 8 +0.6 3 0.7 36
					80.252	171.2	5.54	2n 0.6 36-Inch
5720	A 2462		07 02.6 +15 58					
78.149	243.4	0.21	2 6 0.0 3 0.1 26		5724	A 1324		07 04.2 +56 26
79.181	237.3	0.22	2 6 0.0 3 0.0 26		79.206	180.0	0.26	2 6 +0.2 3 0.1 26
79.206	238.4	0.24	2 7 0.0 3 0.0 26		85.162	177.0	0.29	2 5 -0.1 4 0.0 26
78.845	239.7	0.22	3n 0.0 26-Inch		85.179	184.9	0.30	2 7 0.0 3 0.0 26
Baize, 1976: -6.6, -0.03. Zulevic, 1973: -9.1, 0.00.					83.182	180.6	0.28	3n 0.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

5752	A 519			07 04.4 -03 03			B 1532			07 10.5 -29 21		
80.246	281.0	0.36	2 5 +0.6 3 0.2 36	80.246	336.2	0.82	2 5 +0.6 3 0.6 36					
80.249	277.7	0.38	4 8 +0.5 3 0.3 36	80.249	335.8	0.77	2 8 +0.5 3 0.4 36					
80.251	279.4	0.40	2 5 +0.7 3 0.3 36									
80.249	279.4	0.38	3n 0.3 36-Inch	80.248	336.0	0.80	2n 0.5 36-Inch					
van den Bos, 1959: +3.0, -0.02.				5857	A 2122		07 11.2 -10 33					
5769	A 1741		07 05.2 -00 52		83.170	86.7	0.16	2 5 +0.5 2 0.0 60				
80.251	26.5	1.03	2 5 +0.8 3 0.4 36	83.173	79.6	0.14	2 5 +0.6 2 60					
80.254	26.0	1.02	2 8 +0.7 3 0.8 36	83.176	87.4	0.15	2 7 +0.7 2 60					
80.257	27.7	1.04	2 6 +0.5 3 0.4 36	83.173	84.6	0.15	3n 0.0 60-Inch					
81.100	23.2	1.06	2 5 -0.1 4 0.5 26									
85.140	26.2	1.01	2 7 0.0 4 0.2 26		I 1504		07 11.7 -51 18					
85.179	22.1	1.02	2 5 +0.1 3 0.3 26	80.232	21.3	0.14	2 6 0.0 3 60					
80.254	26.7	1.03	3n 0.5 36-Inch	80.232	21.3	0.14	1n 60-Inch					
83.806	23.8	1.03	3n 0.3 26-Inch									
	HE1 125		07 08.4 +16 39			HDO 199		07 12.0 -63 11				
85.233	210.8	0.24	2 7 0.0 3 0.5 26	80.227	118.2	0.32	2 7 +0.5 3 0.2 60					
87.114	218.4	0.29	2 7 0.0 3 26	80.230	117.6	0.34	2 4 +0.1 3 0.3 60					
87.194	205.7	0.26	2 7 0.0 3 0.0 26	80.232	119.8	0.33	2 6 +0.1 3 0.5 60					
87.224	216.0	0.19	2 7 0.0 3 0.6 26	80.230	118.5	0.33	3n 0.3 60-Inch					
86.691	212.7	0.24	4n 0.4 26-Inch									
5822	A 2845		07 08.9 +10 02		5867	A 2847		07 12.1 +06 22				
81.100	313.8	1.69	2 5 0.0 4 2.8 26	79.219	312.9	0.31	2 5 -0.1 3 0.2 26					
85.140	312.1	1.76	2 6 0.0 4 2.8 26	81.100	304.2	0.36	2 5 0.0 4 0.0 26					
85.162	317.2	1.62	2 5 0.0 4 3.2 26	81.229	308.2	0.40	2 8 -0.1 3 0.3 26					
83.801	314.4	1.69	3n 2.9 26-Inch	80.516	308.4	0.36	3n 0.2 26-Inch					
	I 184		07 09.2 -60 35		5871	STF 1037		07 12.8 +27 14				
83.148	146.8	0.28	2 8 +0.8 3 0.2 36	77.207	324.5	1.28	2 5 -0.4 3 0.0 26					
83.162	151.4	0.28	2 5 +0.4 3 36	78.097	321.8	1.35	2 6 -0.2 3 0.2 26					
83.155	149.1	0.28	2n 0.2 36-Inch	78.127	321.9	1.24	2 6 0.0 3 0.2 26					
	FIN 102		07 09.2 -61 08		78.149	321.7	1.19	2 6 0.0 3 0.0 26				
80.224	75.0	0.31	2 7 +0.5 3 60	85.179	321.0	1.36	2 6 0.0 3 0.2 26					
80.227	73.6	0.28	2 7 +0.4 3 0.2 60	85.203	317.2	1.25	2 5 0.0 3 0.0 26					
80.226	74.3	0.30	2n 0.2 60-Inch	85.214	319.7	1.26	2 5 -0.1 3 0.1 26					
Slow angular increase.				85.233	319.0	1.23	2 7 -0.5 3 0.2 26					
	HE1 127		07 09.5 +16 08		77.895	322.5	1.26	4n 0.1 26-Inch				
87.114	103.6	1.50	2 7 0.0 3 0.0 26	85.207	319.2	1.28	4n 0.1 26-Inch					
87.194	104.2	1.34	2 6 0.0 3 0.0 26	Karmel, 1939: +0.9, -0.06; +0.6, -0.02.								
87.213	102.1	1.65	4 5 -0.1 3 0.0 26	Scardia, 1983: +0.9, +0.02; +0.3, +0.06.								
87.224	103.4	1.44	2 7 0.0 3 0.1 26									
87.186	103.3	1.48	4n 0.0 26-Inch	5900	A 2525		07 13.8 +17 56					
				76.966	102.8	0.98	2 5 0.0 4 2.0 26					
				77.108	102.7	0.91	2 7 +0.1 4 1.5 26					
				77.133	102.4	1.03	2 8 0.0 3 1.2 26					
				77.069	102.6	0.97	3n 1.6 26-Inch					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

67

5893	STT 520	07 13.9 +28 30	5949	A 2855	07 16.8 +00 58
78.127	13.8 0.58	1 5 0.0 3 2.0 26	77.169	327.1 0.25	2 6 -0.1 3 0.0 26
78.149	13.8 0.48	4 5 0.0 3 1.2 26	77.188	325.4 0.28	4 6 0.0 4 0.0 26
79.181	15.1 0.72	2 7 0.0 3 1.6 26	78.127	312.9 0.28	2 4 0.0 3 0.0 26
79.206	20.0 0.46	2 7 +0.1 3 1.1 26	78.149	310.6 0.24	2 5 0.0 3 0.0 26
85.214	21.4 0.59	2 5 -0.1 3 1.6 26	78.239	320.2 0.26	3 6 0.0 3 0.2 26
85.233	18.8 0.61	2 7 -0.4 3 1.0 26	77.774	319.2 0.26	5n 0.0 26-Inch
87.114	17.3 0.62	4 7 0.0 3 0.8 26	Heintz, 1968: -6.3, -0.07.		
87.194	16.4 0.56	2 7 0.0 3 0.6 26			
78.666	15.7 0.56	4n 1.5 26-Inch			
86.189	18.5 0.60	4n 1.0 26-Inch			
5908	A 2526 BC	07 14.3 +15 46	5956	A 2123	07 17.1 -12 02
79.206	339.1 0.43	2 5 +0.1 3 0.2 26	83.156	147.4 0.23	2 6 +0.2 3 0.0 36
81.229	342.4 0.53	2 7 0.0 3 0.4 26	83.162	144.5 0.25	2 5 +0.6 3 0.0 36
81.232	340.7 0.51	2 5 0.0 3 0.3 26	83.159	146.0 0.24	2n 0.0 36-Inch
80.556	340.7 0.49	3n 0.3 26-Inch	Baize, 1980: - 8.7, +0.12.		
	FIN 323	07 14.3 -26 21	Scardia, 1983: -16.7, +0.11.		
80.227	133.2 0.12	2 7 -0.2 3 0.0 60	5952	A 2856	07 17.5 +13 23
80.230	135.0 0.13	2 4 -0.4 3 0.0 60	85.233	303.6 0.40	2 7 0.0 3 0.3 26
80.232	134.9 0.13	2 7 -0.3 3 0.0 60	87.114	303.1 0.55	2 7 0.0 3 0.0 26
80.230	134.4 0.13	3n 0.0 60-Inch	87.194	305.4 0.49	2 7 0.0 3 0.0 26
5925	BU 575	07 14.8 -15 28	86.514	304.0 0.48	3n 0.1 26-Inch
80.257	270.6 0.58	2 6 +0.4 3 0.0 36		I 7	07 17.5 -47 00
83.170	269.7 0.68	2 4 +0.5 2 60	83.143	214.5 0.89	2 6 +0.7 3 0.8 36
83.173	269.2 0.72	2 4 +0.6 2 0.4 60	83.145	215.3 1.01	2 7 +0.8 3 1.0 36
80.257	270.6 0.58	1n 0.0 36-Inch	83.148	214.5 0.83	2 8 +0.7 3 0.8 36
83.172	269.4 0.70	2n 0.4 60-Inch	83.145	214.8 0.91	3n 0.9 36-Inch
Mourao, 1966: -1.4, -0.14; -4.6, -0.02.			Valbousquet, 1981: +3.8, +0.04.		
5918	BU 1023	07 15.2 +25 53	5970	A 526	07 18.4 -03 37
76.016	304.8 0.35	2 5 -0.1 3 0.3 26	79.219	167.9 0.36	1 4 -0.1 3 0.0 26
76.266	302.6 0.40	2 6 -0.1 4 0.3 26	80.246	167.8 0.37	1 4 +0.6 3 36
77.108	302.4 0.33	2 7 +0.2 4 0.2 26	80.249	163.8 0.36	1 8 +0.5 3 0.2 36
76.697	303.3 0.36	3n 0.3 26-Inch	80.251	165.2 0.37	2 5 +0.8 3 0.2 36
5927	ROE 25	07 15.4 +12 21	81.229	170.9 0.42	1 7 +0.2 3 0.1 26
85.233	8.2 3.18	2 7 -0.1 3 0.6 26	80.224	169.4 0.39	2n 0.0 26-Inch
87.213	6.8 3.17	1 5 -0.1 3 1.5 26	80.249	165.6 0.37	3n 0.2 36-Inch
87.224	7.2 3.01	1 7 -0.1 3 0.6 26			
86.557	7.4 3.12	3n 0.9 26-Inch	5978	A 2860	07 19.6 +13 43
	I 312	07 15.5 -75 52	79.219	104.1 0.44	2 5 0.0 3 0.5 26
80.240	156.1 0.90	2 8 +0.3 3 0.0 36	81.229	100.3 0.52	2 7 +0.1 3 0.8 26
80.243	157.6 0.83	2 7 +0.2 3 0.0 36	81.232	101.6 0.48	2 5 -0.2 3 0.8 26
80.242	156.8 0.86	2n 0.0 36-Inch	80.560	102.0 0.48	3n 0.7 26-Inch

5996	STF 1074	07 20.5 +00 25	6028	STF 1051	07 26.5 +73 05		
77.207	167.8	0.56	1 5 -0.3 3 0.4 26	77.169	288.2	0.97	2 7 -0.1 3 1.4 26
78.127	167.5	0.56	1 4 0.0 3 0.4 26	77.185	290.1	1.03	2 4 -0.2 4 2.0 26
78.149	165.4	0.51	1 5 +0.1 3 0.4 26	77.188	286.9	1.00	2 6 0.0 4 1.5 26
78.239	169.4	0.54	1 5 -0.1 3 0.3 26	77.207	286.4	1.03	2 4 -0.3 3 2.0 26
87.213	169.7	0.85	2 6 -0.1 3 0.4 26	77.187	287.9	1.01	4n 1.7 26-Inch
87.224	169.4	0.61	1 7 0.0 3 0.2 26				
87.232	172.7	0.59	1 6 -0.2 3 0.4 26				
77.930	167.5	0.54	4n 0.4 26-Inch	6067	A 2045	07 26.8 +46 11	
87.223	170.6	0.68	3n 0.3 26-Inch	76.966	13.2	1.00	3 6 0.0 4 0.6 26
				77.133	14.2	1.08	2 8 -0.1 3 0.6 26
				77.169	14.3	1.10	1 7 0.0 3 0.6 26
6006	STF 1076	07 21.1 +04 04	77.089	13.9	1.06	3n 0.6 26-Inch	
78.127	108.5	2.90	2 5 0.0 3 0.1 26				
78.149	107.7	2.76	2 5 +0.1 3 0.1 26	6081	J 367	07 26.8 +05 10	
78.239	108.5	2.93	2 6 +0.1 3 0.0 26	81.232	322.7	1.44	2 4 0.0 3 0.2 26
				85.140	322.9	1.31	2 7 0.0 4 0.7 26
78.172	108.2	2.86	3n 0.1 26-Inch	85.162	323.0	1.36	2 6 -0.1 4 0.3 26
				83.845	322.9	1.37	3n 0.4 26-Inch
6014	A 1743	07 22.5 +46 20		6086	STF 1094	07 27.4 +15 19	
76.016	273.8	1.14	2 5 -0.1 3 1.8 26	78.943	95.0	2.48	2 4 +0.1 3 0.6 26
76.966	274.9	1.23	2 6 -0.1 4 2.4 26	79.181	95.1	2.47	2 6 0.0 3 0.8 26
77.108	271.5	1.24	2 7 +0.1 4 2.0 26	79.203	96.5	2.50	2 4 -0.3 3 1.5 26
76.697	273.4	1.20	3n 2.1 26-Inch	79.109	95.5	2.48	3n 1.0 26-Inch
6020	HO 243	07 22.6 +29 16		6115	J 62	07 29.1 +06 47	
79.161	172.3	2.40	2 7 0.0 3 0.4 26	79.181	301.8	0.99	2 6 0.0 3 0.2 26
79.206	169.9	2.41	2 6 +0.2 3 0.2 26	79.219	304.3	1.03	2 5 +0.1 3 0.1 26
79.219	170.8	2.35	2 5 +0.1 3 0.0 26	80.095	307.3	1.01	2 5 -0.2 3 0.3 26
79.202	171.0	2.39	3n 0.2 26-Inch	79.498	304.5	1.01	3n 0.2 26-Inch
6029	A 3047	07 23.0 -07 06		6121	A 2729	07 29.2 +03 23	
83.162	57.7	2.03	2 5 +0.7 3 1.6 36	87.213	230.8	3.65	2 6 -0.2 3 3.5 26
83.170	57.0	1.93	2 4 +0.5 2 2.2 60	87.224	231.0	3.50	2 7 -0.1 3 4.0 26
83.173	55.2	1.87	2 6 +0.7 2 1.6 60	87.232	233.1	3.78	2 6 -0.1 3 3.0 26
83.162	57.7	2.03	1n 1.6 36-Inch	87.223	231.6	3.64	3n 3.5 26-Inch
83.172	56.1	1.90	2n 1.9 60-Inch				
6023	BU 1024	07 23.1 +29 19		6120	STF 1099	07 29.4 +11 33	
79.181	103.0	1.50	2 7 -0.1 3 2.0 26	87.213	342.1	3.77	1 6 -0.1 3 0.2 26
79.206	100.3	1.22	2 6 +0.1 3 1.8 26	87.224	341.7	3.84	2 7 0.0 3 0.2 26
79.219	100.1	1.50	2 5 0.0 3 1.5 26	87.232	341.5	3.99	2 7 0.0 3 0.2 26
79.202	101.1	1.41	3n 1.8 26-Inch	87.223	341.8	3.87	3n 0.2 26-Inch
6055	A 2865	07 24.6 +05 16			RST 255	07 30.1 -63 26	
81.232	103.6	0.72	2 5 -0.1 3 0.8 26	80.227	202.6	1.19	1 7 +0.3 3 0.1 60
85.140	102.1	0.78	2 6 -0.1 4 0.3 26	80.230	205.0	1.19	2 4 0.0 3 0.1 60
85.162	108.4	0.55	2 5 -0.2 4 1.5 26	80.232	203.2	1.25	2 6 -0.1 3 60
85.179	104.2	0.69	2 5 0.0 3 0.8 26	80.230	203.6	1.21	3n 0.1 60-Inch
84.178	104.6	0.68	4n 0.8 26-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

69

6117	STF 1093	07 30.3 +49 59	6154	HU 1244	07 32.2 +14 05
85.179	189.9	0.73 2 5 0.0 3 0.2 26	85.140	293.0	0.44 2 7 0.0 4 0.0 26
85.203	186.2	0.71 2 5 -0.1 3 0.0 26	85.203	287.2	0.47 2 6 -0.1 3 0.2 26
85.214	190.4	0.81 2 5 -0.2 3 0.2 26	85.214	294.8	0.49 2 5 -0.2 3 0.0 26
85.233	188.1	0.84 2 7 -0.1 3 0.2 26	85.233	293.6	0.50 2 7 0.0 3 0.2 26
85.207	188.6	0.77 4n 0.2 26-Inch	85.198	292.2	0.48 4n 0.1 26-Inch
Baize, 1958: -4.0, +0.01. Scardia, 1984: -1.1, 0.00.			Valbousquet, 1981: +12.4, +0.25. Neither this orbit, nor Baize's (1957) is satis- factory.		
6133	FIN 105	07 30.3 -56 58	6173	RST 3522	07 32.2 -14 08
83.143	107.0	0.39 2 7 +0.7 3 0.2 36	80.257	289.2	0.22 2 7 +0.4 3 0.0 36
83.145	103.1	0.28 2 7 +0.8 3 0.2 36	80.257	289.2	0.22 1n 0.0 36-Inch
83.148	108.9	0.31 2 8 +0.8 3 0.2 36			
83.145	106.3	0.33 3n 0.2 36-Inch			
6151	AG 334	07 30.5 +25 47	6175	B 2147	07 33.2 -71 15
78.127	351.7	2.08 2 5 0.0 3 0.2 26	80.240	299.1	0.97 2 8 +0.9 3 0.6 36
78.149	351.4	1.99 2 6 0.0 3 0.2 26	80.243	297.1	0.97 2 7 +0.1 3 0.5 36
78.239	351.8	2.14 2 5 0.0 3 0.0 26	80.242	298.1	0.97 2n 0.6 36-Inch
78.172	351.6	2.07 3n 0.1 26-Inch			
6137	SEE 80	07 30.7 -28 06	6175	A 3091	07 33.7 -15 09
83.151	66.8	0.53 2 8 +0.6 3 0.4 36	80.257	292.4	1.44 2 7 +0.2 3 2.2 36
83.156	59.9	0.52 2 5 +0.6 3 0.6 36	80.257	292.4	1.44 1n 2.2 36-Inch
83.154	63.4	0.52 2n 0.5 36-Inch			
6147	A 673	07 30.9 +30 35	6175	BU 579	07 34.5 +33 07
85.233	356.0	0.41 2 6 -0.2 3 0.2 26	80.095	222.4	0.95 2 6 -0.1 3 2.4 26
86.230	354.3	0.40 2 7 -0.3 3 0.2 26	81.229	215.0	1.23 2 7 0.0 3 2.8 26
86.249	350.0	0.33 2 8 -0.2 3 0.2 26	81.232	217.6	1.12 2 5 0.0 3 2.8 26
86.252	352.8	0.43 2 7 0.0 3 0.2 26	80.852	218.3	1.10 3n 2.7 26-Inch
85.991	353.3	0.39 4n 0.2 26-Inch			
6147	A 1967	07 30.9 -02 10	6175	STF 1110	07 34.6 +31 53
80.230	355.5	1.32 4 4 +0.1 3 1.6 60	76.966	106.0	2.14 2 7 0.0 4 0.8 26
80.232	2.3	1.50 1 5 0.0 3 2.5 60	77.108	105.1	2.05 2 7 0.0 4 0.8 26
80.231	358.9	1.41 2n 2.0 60-Inch	77.149	105.0	2.15 2 5 +0.1 3 0.9 26
			77.169	107.2	2.22 2 7 0.0 3 0.9 26
			77.185	107.7	2.34 2 4 -0.3 4 0.8 26
			77.188	105.5	2.21 2 7 0.0 4 0.8 26
			78.083	103.0	2.16 2 7 -0.5 3 0.8 26
			78.097	101.0	2.20 2 6 -0.3 3 0.8 26
			78.108	101.0	2.35 2 4 -0.1 3 0.8 26
			78.127	103.5	2.21 2 6 0.0 3 0.8 26
			78.149	103.5	2.26 2 5 0.0 3 0.8 26
			78.239	103.3	2.11 2 5 0.0 3 0.8 26
			78.943	102.6	2.17 2 4 +0.1 3 0.9 26
			79.181	101.9	2.27 2 7 0.0 3 0.8 26
			79.203	101.6	2.46 2 3 -0.3 3 0.8 26
			79.206	101.0	2.25 2 6 0.0 3 0.9 26
			79.219	99.7	2.32 2 5 0.0 3 0.8 26
			80.084	98.6	2.57 2 4 -0.5 3 0.8 26
			80.095	97.8	2.33 2 6 -0.1 3 0.8 26
			81.100	93.3	2.33 2 5 -0.1 4 0.8 26
			81.229	96.0	2.42 2 8 -0.4 3 0.8 26
			81.232	96.9	2.37 2 5 -1.0 3 0.8 26
			81.267	94.4	2.38 2 7 +0.3 3 0.8 26
6147	A 3090	07 30.9 -15 14			
83.162	142.0	1.47 2 5 +0.7 3 0.8 36			
83.176	143.3	1.53 2 7 +0.5 2 1.8 60			
83.178	143.6	1.41 2 4 +0.5 2 1.7 60			
83.162	142.0	1.47 1n 0.8 36-Inch			
83.177	143.4	1.47 2n 1.8 60-Inch			

71

6236	A 3051	07 37.9 -06 37	6263	STF 1126	07 40.1 +05 14				
83.154	169.1	0.30	2 6 +0.5 3	36	77.185	162.7	1.00	1 5 -0.2 3	0.2 26
83.156	172.6	0.21	2 6 +0.1 3	36	77.188	163.0	0.95	1 7 +0.1 4	0.3 26
					77.193	163.5	0.98	1 7 +0.1 3	0.2 26
83.155	170.8	0.26	2n	36-Inch	77.207	164.8	0.94	1 4 -0.2 3	0.4 26
					85.233	166.5	0.98	4 7 -0.1 3	0.3 26
					86.230	168.0	0.97	1 6 -0.4 3	0.3 26
6235	A 2948	07 38.2 +09 30			86.249	169.0	0.98	4 7 -0.1 3	0.4 26
					86.252	168.3	0.93	1 7 -0.1 3	0.3 26
87.194	278.4	0.55	2 6 -0.1 3	0.0 26					
87.213	278.7	0.47	2 5 -0.1 3	0.0 26	77.193	163.5	0.97	4n	0.3 26-Inch
87.224	277.4	0.38	2 7 -0.1 3	0.2 26	85.991	168.0	0.96	4n	0.3 26-Inch
87.232	283.2	0.39	2 6 -0.1 3	0.0 26					
87.216	279.4	0.45	4n	0.0 26-Inch					
					6269	A 2740	07 40.3 -12 57		
6230	STF 1119	07 38.5 +33 43			83.162	165.9	1.23	2 5 +0.9 3	0.5 36
					83.176	167.6	1.28	2 7 +0.5 2	0.3 60
80.095	351.4	3.11	2 6 0.0 3	0.9 26	83.184	167.4	1.29	2 6 +0.2 2	0.3 60
81.229	353.9	3.25	2 7 +0.1 3	1.5 26					
81.232	352.6	3.16	2 5 -0.8 3	1.3 26	83.162	165.9	1.23	1n	0.5 36-Inch
					83.180	167.5	1.28	2n	0.2 60-Inch
80.852	352.6	3.17	3n	1.2 26-Inch					
					6279	A 1968	07 41.1 -01 24		
6245	A 535	07 38.7 -05 00			76.966	331.2	0.33	1 5 0.0 4	0.0 26
					77.108	340.7	0.37	1 5 0.0 4	0.0 26
83.170	172.3	0.36	2 4 +0.4 2	0.0 60	77.169	338.0	0.29	1 5 0.0 3	0.2 26
83.172	171.0	0.32	2 5 +0.5 2	60	77.188	335.1	0.31	3 6 +0.2 4	0.2 26
					80.246	333.8	0.30	1 5 +0.3 3	36
83.171	171.6	0.34	2n	0.0 60-Inch	80.249	334.4	0.31	2 9 +0.2 3	0.0 36
					80.254	334.8	0.29	2 8 +0.3 3	0.3 36
					85.233	315.9	0.26	2 7 0.0 3	0.0 26
6251	SHB 1	07 39.3 +05 14			86.230	320.0	0.28	2 6 -0.3 3	26
					86.249	324.4	0.24	2 7 -0.1 3	0.0 26
86.252	356.7	5.4:	1 7 0.0 3	26	86.252	322.3	0.29	2 7 +0.2 3	0.0 26
86.255	355.7	4.8:	1 7 0.0 3	26					
					77.108	336.2	0.32	4n	0.0 26-Inch
86.254	356.2	5.1:	2n	26-Inch	80.250	334.3	0.30	3n	0.2 36-Inch
					85.991	320.6	0.27	4n	0.0 26-Inch
Strand, 1951: -5.9, -0.05:.					Scardia, 1983: +2.6, -0.02; +4.9, -0.03;				
Very difficult. No doubt the agreement of					-0.3, -0.03.				
the two angles is fortuitous.									
					6290	J 45	07 41.6 +09 01		
	RST 3537	07 39.5 -16 02			87.194	189.9	2.98	2 7 0.0 3	1.0 26
83.151	256.2	0.24	2 7 +0.6 3	0.2 36	87.213	190.2	3.26	3 5 0.0 3	1.0 26
83.154	247.6	0.29	2 5 +0.6 3	0.2 36	87.224	193.6	2.91	1 7 -0.1 3	1.2 26
83.152	251.9	0.26	2n	0.2 36-Inch	87.210	191.2	3.05	3n	1.1 26-Inch
					6276	STT 177	07 41.7 +37 26		
6258	BRD 2	07 39.8 +05 16			81.232	170.0	0.28	2 8 -0.1 3	1.0 26
					85.162	163.4	0.28	2 6 -0.1 4	0.8 26
77.185	186.3	0.84	1 4 -0.2 3	0.3 26	85.179	163.0	0.35	2 6 0.0 3	1.2 26
77.188	185.8	0.90	1 7 0.0 4	0.3 26	85.203	155.4	0.35	2 6 -0.1 3	1.2 26
77.193	186.6	0.86	1 7 0.0 3	0.3 26					
77.207	187.6	0.76	1 4 -0.3 3	0.3 26	84.194	163.0	0.32	4n	1.0 26-Inch
77.193	186.6	0.84	4n	0.3 26-Inch	Heintz, 1982: -0.4, -0.08.				

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

6291	STF 1130	07 41.7 +09 42		RST 4862	07 44.3 -20 18
76.966	302.0	0.27	2 6 +0.1 4 0.4 26	80.224	6.8 0.30 2 7 +0.8 3 60
77.108	302.5	0.23	2 6 +0.3 4 0.3 26	80.227	12.2 0.25 2 6 +0.6 3 0.0 60
77.149	303.2	0.38	2 5 +0.1 3 0.4 26	80.232	5.2 0.24 2 5 +0.1 3 60
77.169	302.9	0.29	2 6 0.0 3 0.3 26	80.228	8.1 0.26 3n 0.0 60-Inch
78.239	309.9	0.31	2 5 0.0 3 0.4 26	Slight angular decrease.	
79.181	314.6	0.31	2 6 0.0 3 0.3 26		
79.206	305.9	0.27	2 5 -0.1 3 0.3 26		
79.219	313.9	0.28	2 5 0.0 3 0.4 26		
80.095	310.5	0.35	2 5 0.0 3 0.4 26		
81.229	320.4	0.38	4 5 +0.1 3 0.4 26		
81.232	321.7	0.27	2 5 -0.7 3 0.4 26	RST 2500	07 44.3 -25 47
85.140	338.4	0.32	2 7 0.0 4 0.5 26	83.143	316.1 0.23 2 7 +0.7 3 36
85.162	337.4	0.31	2 5 -0.1 4 0.3 26	83.145	319.3 0.25 2 7 +0.7 3 0.0 36
85.179	326.6	0.32	2 5 0.0 3 0.4 26	83.144	317.7 0.24 2n 0.0 36-Inch
85.203	330.9	0.34	2 5 0.0 3 0.3 26	Angular increase.	
87.114	335.4	0.34	2 7 0.0 3 0.3 26		
87.174	338.1	0.36	2 5 -0.2 3 0.2 26		
87.194	345.1	0.39	1 7 -0.1 3 0.3 26		
87.213	333.5	0.38	3 5 -0.1 3 0.4 26		
77.098	302.6	0.28	4n 0.4 26-Inch	6339	I 780 07 44.5 -23 51
78.961	311.1	0.29	4n 0.4 26-Inch	80.230	359.9 0.61 2 4 +0.3 3 0.4 60
80.852	317.5	0.33	3n 0.4 26-Inch	80.232	1.1 0.77 1 4 +0.2 3 0.5 60
85.171	333.3	0.32	4n 0.4 26-Inch	80.231	0.5 0.69 2n 0.4 60-Inch
87.174	338.0	0.37	4n 0.3 26-Inch		
Baize, 1984: +1.4, -0.04; +2.0, -0.04; +0.7, 0.00; -0.9, -0.01; -4.5, +0.05.				6323	A 674 07 44.6 +31 07
6292	J 373	07 41.7 +05 51		81.232	121.8 1.12 2 5 0.0 3 2.0 26
79.181	98.2	1.69	2 6 +0.1 3 1.0 26	85.203	119.2 1.12 2 5 -0.2 3 2.4 26
79.206	100.2	1.81	2 6 0.0 3 1.2 26	85.214	123.0 1.13 2 4 +0.1 3 2.5 26
79.219	102.1	1.67	2 5 +0.1 3 1.6 26	83.883	121.3 1.12 3n 2.3 26-Inch
79.178	100.2	1.72	3n 1.3 26-Inch		
	FIN 35	07 41.9 -54 25		6342	OL 58 07 44.8 -19 18
80.224	226.0	0.57	2 8 +0.4 3 0.4 60	80.224	120.9 1.62 2 8 +0.9 3 0.5 60
80.227	224.5	0.54	2 6 +0.4 3 0.2 60	80.227	119.1 1.60 2 7 +0.7 3 0.2 60
80.226	225.2	0.56	2n 0.3 60-Inch	80.226	120.0 1.61 2n 0.4 60-Inch
6315	HU 710	07 43.0 -17 04		6347	HO 247 07 46.1 +21 07
80.224	94.0	0.46	2 8 +0.6 3 0.5 60	77.169	222.9 0.35 1 7 0.0 3 0.5 26
80.227	94.7	0.43	2 6 +0.5 3 0.3 60	77.185	223.0 0.34 2 5 -0.2 3 0.4 26
83.143	89.7	0.34	2 8 +0.6 3 0.3 36	77.188	222.9 0.34 2 6 +0.2 4 0.3 26
83.145	90.5	0.35	2 8 +0.7 3 0.3 36	77.193	223.5 0.33 2 7 +0.1 3 0.3 26
83.148	88.2	0.35	2 7 +0.7 3 0.2 36	77.184	223.1 0.34 4n 0.4 26-Inch
80.226	94.4	0.44	2n 0.4 60-Inch	Heintz, 1984: -0.9, -0.02.	
83.145	89.5	0.35	3n 0.3 36-Inch		
Heintz, 1981: +2.4, +0.06; +1.1, -0.05.					
6327	HU 844	07 44.1 -16 56			
80.246	130.5	0.23	2 5 +0.4 3 0.4 36	RST 4373	07 46.7 -03 21
80.249	130.4	0.28	2 9 +0.2 3 0.4 36	83.176	77.2 0.42 2 7 +0.5 2 0.5 60
80.254	130.6	0.23	2 8 +0.3 3 0.1 36	83.184	80.1 0.38 2 6 +0.1 2 0.2 60
80.250	130.5	0.25	3n 0.3 36-Inch	83.180	78.6 0.40 2n 0.4 60-Inch

73

	HU 1428		07 46.8 -46 48	6378	WRH 15		07 48.6 +23 08
80.240	25.8	0.46	2 8 +0.3 3 1.1 36	77.169	58.3	0.25	2 6 +0.1 3 0.5 26
80.243	25.2	0.42	2 7 +0.4 3 1.0 36	77.185	53.3	0.28	2 5 -0.1 3 0.6 26
				77.188	52.8	0.29	3 6 +0.2 4 0.8 26
80.242	25.5	0.44	2n 1.0 36-Inch	77.193	59.7	0.27	1 7 +0.2 3 1.2 26
				82.242	57.7	0.26	2 6 +0.1 3 0.2 26
	B 1076		07 47.0 -21 20	85.140	46.4	0.26	2 7 0.0 4 0.5 26
83.170	9.6	2.02	2 4 +0.4 2 3.2 60	85.162	39.0	0.29	2 6 -0.1 4 0.5 26
83.173	8.8	2.00	2 5 +0.5 2 2.7 60	85.179	53.0	0.28	2 5 +0.1 3 26
83.172	9.2	2.01	2n 3.0 60-Inch	77.184	56.0	0.27	4n 0.8 26-Inch
				84.431	49.0	0.27	4n 0.4 26-Inch
6354	HU 1247		07 48.0 +60 18		FIN 110		07 48.7 -62 25
85.233	275.6	0.24	2 6 -0.3 3 0.0 26	80.240	298.0	1.04	2 8 +0.5 3 0.7 36
86.230	260.7	0.24	2 6 -0.5 3 26	80.243	300.0	0.98	2 7 +0.6 3 0.6 36
86.249	267.6	0.22	2 7 -0.3 3 0.2 26	80.257	300.7	1.04	2 7 +0.6 3 1.0 36
86.252	259.7	0.26	2 7 -0.3 3 0.0 26				
85.991	265.9	0.24	4n 0.0 26-Inch	80.247	299.6	1.02	3n 0.8 36-Inch
Beize, 1961: -3.2, 0.00.							Decrease in angle, increase in distance.
	B 1077		07 48.0 -19 24		B 145		07 49.7 -23 50
83.148	302.7	0.52	2 7 +0.7 3 0.4 36	83.170	159.5	0.76	2 3 +0.4 2 0.2 60
83.151	300.6	0.59	2 8 +0.6 3 0.8 36	83.173	151.6	0.76	2 5 +0.6 2 0.4 60
83.150	301.6	0.56	2n 0.6 36-Inch	83.176	153.3	0.85	2 7 +0.6 2 0.5 60
				83.173	154.8	0.79	3n 0.4 60-Inch
			Increase in angle and separation.				
	FIN 109		07 48.3 -56 28	6395	HO 37		07 49.9 -02 16
80.240	231.3	0.91	2 8 +0.4 3 2.2 36	83.154	178.5	1.66	1 5 +0.5 3 0.1 36
80.243	231.4	1.25	2 7 +0.5 3 2.0 36	83.156	176.3	1.55	2 6 +0.1 3 0.2 36
80.257	227.5	1.01	1 6 +0.5 3 1.7 36				
80.247	230.1	1.06	3n 2.0 36-Inch	83.155	177.4	1.60	2n 0.2 36-Inch
			No measures for 37 years. Angular increase.				
6383	A 334		07 48.4 -04 47	6412	BU 1195		07 51.3 -09 24
80.246	112.7	0.28	2 5 +0.4 3 0.6 36	80.246	93.0	0.23	2 5 +0.4 3 0.2 36
80.249	117.0	0.24	2 9 +0.6 3 0.4 36	80.249	93.7	0.21	2 9 +0.3 3 0.0 36
80.254	113.4	0.22	2 8 +0.3 3 0.2 36	80.251	93.4	0.21	2 7 +0.8 3 0.0 36
80.250	114.4	0.25	3n 0.4 36-Inch	80.249	93.4	0.22	3n 0.1 36-Inch
	OL 5 AXBC		07 48.4 -19 22	6420	BU 101		07 51.7 -13 53
83.148	216.3	2.71	2 7 +0.8 3 3.0 36	80.224	41.0	0.19	2 8 +0.9 3 60
83.151	215.6	2.43	2 8 +0.7 3 3.0 36	80.227	47.4	0.17	2 6 +0.7 3 0.6 60
83.150	216.0	2.57	2n 3.0 36-Inch	80.230	44.8	0.17	2 5 +0.4 3 0.3 60
	B 2154 BC			83.143	88.3	0.24	2 8 +0.8 3 0.5 36
83.148	197.0	1.17	2 7 +0.9 3 0.6 36	83.145	88.0	0.34	2 7 +0.7 3 0.6 36
83.151	200.0	1.29	2 7 +0.8 3 0.5 36	83.148	90.2	0.28	2 8 +1.0 3 0.6 36
83.150	198.5	1.23	2n 0.6 36-Inch	80.227	44.5	0.18	3n 0.4 60-Inch
				83.145	88.8	0.29	3n 0.6 36-Inch
				Woolley, Symms,			1937: -4.6, -0.01; -0.7, 0.00.
				Breakiron, Gatewood,			1975: -1.5, +0.02; +2.1, 0.00.

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

6424	HU 53	07 52.3 -11 39		I 26	07 57.4 -47 53
83.143	150.4	0.38	2 7 +0.9 3 0.3 36	83.176	62.5 0.38 2 7 +0.6 2 0.7 60
83.145	147.1	0.43	2 6 +0.8 3 0.7 36	83.178	65.8 0.41 2 4 +0.3 2 60
83.144	148.8	0.40	2n 0.5 36-Inch	83.184	66.8 0.38 2 6 +0.2 2 0.4 60
				83.179	65.0 0.39 3n 0.6 60-Inch
6425	STT 182	07 52.7 +03 24		Closing in.	
87.114	16.4	0.93	1 7 -0.2 3 0.3 26		
87.174	13.8	0.87	1 6 0.0 3 0.0 26		
87.194	14.8	0.91	1 7 -0.1 3 0.2 26		
87.213	16.8	0.93	1 6 -0.1 3 0.0 26		
87.174	15.4	0.91	4n 0.1 26-Inch		
	FIN 325	07 52.8 -05 25		JSP 208 BC	07 57.8 -60 18
83.151	184.7	0.35	2 7 +0.9 3 0.3 36	83.159	289.0 3.01 2 7 +0.8 3 3.5 36
83.154	183.3	0.36	2 5 +0.5 3 36	83.176	284.5 2.88 2 8 +0.8 2 3.0 60
83.156	182.3	0.28	2 7 +0.1 3 0.4 36	83.184	284.8 3.09 2 5 +0.1 2 3.5 60
83.154	183.4	0.33	3n 0.4 36-Inch	83.159	289.0 3.01 1n 3.5 36-Inch
				83.180	284.6 2.98 2n 3.2 60-Inch
Heintz, 1978: +3.7, -0.02.				Increase in angle and separation.	
	COU 2075	07 55.6 +36 30		6494	J 70 07 59.1 +06 20
85.233	144.6	0.76	2 6 -0.2 3 0.4 26	78.149	310.3 2.21 2 5 0.0 3 1.3 26
86.230	140.9	0.87	2 6 -0.2 3 0.5 26	78.239	311.9 2.12 2 5 0.0 3 2.1 26
86.249	139.0	0.82	2 8 0.0 3 0.5 26	78.242	312.3 2.09 4 4 +0.3 3 1.8 26
85.904	141.5	0.82	3n 0.5 26-Inch	78.210	311.5 2.14 3n 1.7 26-Inch
6464	A 2538	07 55.8 +24 20		6491	STF 1161 07 59.7 +46 38
79.219	309.7	0.74	2 5 0.0 3 1.0 26	78.127	195.8 2.93 1 6 -0.3 3 1.4 26
81.232	310.8	0.66	2 5 -0.1 3 1.7 26	78.239	198.5 2.77 2 5 -0.1 3 1.6 26
85.140	306.3	0.70	2 7 0.0 4 1.4 26	78.943	196.5 2.78 2 4 -0.2 3 1.2 26
85.162	306.4	0.84	2 5 -0.1 4 1.4 26	78.436	196.9 2.83 3n 1.4 26-Inch
82.688	308.3	0.74	4n 1.4 26-Inch		
	SEE 91	07 55.8 -43 51		I 1070	07 59.7 -47 18
83.178	342.9	0.55	2 4 +0.2 2 0.3 60	83.176	0.0 0.27 2 8 +0.6 2 0.6 60
83.184	340.2	0.67	2 7 +0.1 2 0.5 60	83.184	355.3 0.28 2 7 +0.2 2 0.2 60
83.181	341.6	0.61	2n 0.4 60-Inch	83.180	357.6 0.28 2n 0.4 60-Inch
6483	STT 185	07 57.3 +01 08		6499	STF 1170 07 59.8 +13 42
77.169	46.8	0.25	2 6 0.0 3 0.2 26	78.108	105.6 2.41 2 4 -0.3 3 0.2 26
77.188	43.3	0.25	2 6 0.0 4 0.0 26	78.127	106.0 2.34 2 6 -0.2 3 0.2 26
77.193	48.9	0.26	3 7 -0.1 3 0.2 26	78.149	106.3 2.31 2 5 0.0 3 0.1 26
77.278	42.8	0.23	1 6 +0.5 3 0.2 26	78.239	106.0 2.31 2 5 0.0 3 0.2 26
86.230	71.4	0.15	2 6 -0.4 3 26	78.156	106.0 2.34 4n 0.2 26-Inch
86.249	88.9	0.10	2 7 +0.1 3 26		
86.252	77.4	0.13	2 7 0.0 3 26	6511	A 2954 08 00.5 +09 55
86.255	79.5	0.16	2 6 0.0 3 26	87.194	346.4 0.73 1 7 -0.1 3 0.4 26
77.207	45.4	0.25	4n 0.2 26-Inch	87.213	345.6 0.68 1 7 -0.2 3 0.3 26
86.246	79.3	0.14	4n 26-Inch	87.224	344.4 0.59 1 7 -0.2 3 0.2 26
van den Bos, 1949: - 1.0, +0.01; -14.7, +0.01.				87.232	350.0 0.57 2 5 0.0 3 0.3 26
				87.216	346.6 0.64 4n 0.3 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

75

6 1574				08 00.7 -31 46				B 2164 CD				08 03.9 -31 33			
83.173	206.0	0.35	2 4	+0.6	2 0.3	60		83.156	59.3	4.08	2 5	+1.2	3 0.3	36	
83.176	210.2	0.31	2 7	+0.9	2 0.6	60		83.162	60.0	4.13	2 5	+0.7	3 0.2	36	
83.184	207.7	0.36	2 7	+0.4	2 0.2	60									
83.178	208.0	0.34	3n	0.4	60-Inch			83.159	59.6	4.10	2n	0.2	36-Inch		
6523				0L 30				6549				STT 187			
				08 00.8 -29 28								08 04.3 +33 02			
80.230	71.7	1.12	2 5	+0.4	3 0.1	60		80.095	359.1	0.31	2 5	-0.1	3 0.2	26	
80.232	71.4	1.15	2 5	+0.1	3 0.0	60		81.229	1.3	0.32	2 5	0.0	3 0.3	26	
								81.232	357.8	0.34	2 6	0.0	3 0.3	26	
								81.267	0.9	0.39	2 7	0.0	3 0.3	26	
80.231	71.6	1.14	2n	0.1	60-Inch			85.179	352.2	0.34	2 5	-0.1	3 0.0	26	
								85.203	350.8	0.34	2 6	-0.2	3 0.5	26	
6527				A 539				85.214	354.0	0.36	2 5	-0.1	3 0.3	26	
				08 01.9 -03 33				85.233	354.2	0.38	2 7	-0.1	3 0.3	26	
76.966	20.4	0.68	1 5	0.0	4 0.5	26		80.956	359.8	0.34	4n	0.3	26-Inch		
77.108	23.8	0.62	1 5	+0.1	4 0.6	26		85.207	352.8	0.36	4n	0.3	26-Inch		
77.149	23.4	0.56	1 4	0.0	3 0.5	26		Morel, 1970: +5.4, +0.03; +2.0, +0.04.							
77.169	24.1	0.70	1 5	0.0	3 0.3	26									
77.098	22.9	0.64	4n	0.5	26-Inch			6554				BU 581			
												08 04.3 +12 18			
				I 8				78.127	251.1	0.36	2 5	-0.1	3 0.2	26	
80.257	304.2	2.40	2 7	+0.5	3 2.0	36		78.149	252.6	0.41	2 5	+0.1	3 0.0	26	
80.257	304.2	2.40	1n	2.0	36-Inch			78.239	247.7	0.34	2 5	0.0	3 0.0	26	
6532				STF 1175				87.194	279.9	0.54	2 7	0.0	3 0.0	26	
				08 02.5 +04 09				87.213	281.8	0.56	2 5	0.0	3 0.0	26	
77.169	269.0	1.34	2 6	0.0	3 1.5	26		87.224	281.0	0.49	2 8	-0.1	3 0.3	26	
77.185	268.2	1.45	2 5	-0.2	3 1.4	26		87.232	280.1	0.48	2 4	0.0	3 26		
77.188	268.3	1.34	4 2	0.0	4 1.6	26		78.172	250.5	0.37	3n	0.0	26-Inch		
77.193	268.5	1.36	2 7	0.0	3 1.5	26		87.216	280.7	0.52	4n	0.1	26-Inch		
87.194	271.8	1.36	2 7	-0.1	3 1.4	26		Heintz, 1974: +5.0, -0.08; +1.9, +0.01.							
87.213	273.0	1.27	2 7	-0.1	3 1.2	26		6566				I 487			
87.224	274.2	1.31	2 7	-0.2	3 1.4	26						08 04.5 -25 42			
87.232	275.4	1.37	2 5	-0.1	3 1.2	26		83.170	24.2	1.80	2 4	+0.4	2 2.4	60	
77.184	268.5	1.37	4n	1.5	26-Inch			83.173	24.2	1.87	2 5	+0.6	2 2.4	60	
87.216	273.6	1.33	4n	1.3	26-Inch			83.184	21.5	1.95	2 7	+0.5	2 2.7	60	
Hopmann, 1964: -0.7, +0.16; -4.6, +0.15.								83.176	23.3	1.87	3n	2.5	60-Inch		
6547				A 1581				6545				STF 1172			
				08 03.1 -06 25								08 04.7 +54 45			
80.230	293.6	1.22	2 5	+0.5	3 0.2	60		78.943	243.5	1.55	2 4	-0.2	3 1.5	26	
80.232	293.7	1.12	2 5	+0.2	3 0.3	60		85.162	243.8	1.75	2 5	-0.1	4 1.2	26	
80.231	293.6	1.17	2n	0.2	60-Inch			85.179	242.8	1.55	4 4	0.0	3 1.5	26	
Heintz, 1967: -3.0, +0.39. The orbit fails in separation.								83.095	243.4	1.62	3n	1.4	26-Inch		
6550				OL 60				J 2053				08 05.4 -16 52			
				08 03.8 +12 39				83.154	35.1	4.85	2 5	+0.6	3 0.7	36	
79.219	109.9	3.81	2 5	0.0	3 0.6	26		83.184	35.6	5.07	2 7	+0.6	2 0.6	60	
81.232	109.3	3.75	2 5	-0.1	3 0.5	26									
81.267	107.7	3.77	2 6	+0.1	3 0.9	26		83.154	36.1	4.85	1n	0.7	36-Inch		
80.573	109.0	3.78	3n	0.7	26-Inch			83.184	35.6	5.07	1n	0.6	60-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

6582	A 1971	08 06.1 -00 46	6619	J 734	08 08.9 +07 50				
76.966	19.2	0.79	1 5	0.0 4 0.2 26	79.181	240.6	1.99	2 6	0.0 3 0.4 26
77.108	17.9	0.91	1 5	+0.1 4 0.0 26	79.206	240.2	2.01	2 5	+0.2 3 0.7 26
77.149	19.7	0.70	1 5	0.0 3 0.2 26	79.219	239.6	1.95	2 5	0.0 3 0.8 26
77.185	19.4	0.90	1 5	-0.2 3 0.0 26	79.202	240.1	1.98	3n	0.6 26-Inch
77.102	19.0	0.82	4n	0.1 26-Inch	6630	BU 583	08 09.2 -06 43		
Zulevic, 1979: -0.2, 0.00.			83.154	72.3	1.92	2 6	+0.7 3 0.3 36		
6584	J 420	08 06.2 +02 01	83.162	74.3	1.86	2 4	+0.8 3 0.4 36		
76.257	231.2	0.50	2 8	+0.1 4 0.5 26	83.158	73.3	1.89	2n	0.4 36-Inch
76.966	234.3	0.50	2 5	0.0 4 0.2 26	B 1089 08 09.2 -37 48				
77.108	235.3	0.62	2 5	+0.2 4 0.3 26	80.240	202.6	0.38	2 8	+0.3 3 0.5 36
77.169	233.4	0.54	2 6	+0.1 3 0.3 26	80.243	206.4	0.38	2 7	+0.4 3 0.4 36
79.181	221.9	0.50	2 5	-0.1 3 0.1 26	80.246	202.6	0.36	2 5	+0.6 3 0.3 36
79.219	225.8	0.59	3 5	0.0 3 0.5 26	80.243	202.6	0.37	3n	0.4 36-Inch
76.875	233.6	0.54	4n	0.3 26-Inch	6615	HU 850	08 09.4 +37 35		
79.200	223.8	0.54	2n	0.3 26-Inch	77.185	353.8	0.52	2 5	0.0 3 0.2 26
This pair appears to be in rapid motion, but annual observation is needed to define its nature.			77.193	350.0	0.56	2 7	0.0 3 0.3 26		
6591	OL 31	08 06.2 -22 52	77.207	354.8	0.57	2 4	-0.3 3 0.3 26		
83.145	37.7	0.78	2 7	+0.8 3 0.1 36	77.195	352.9	0.55	3n	0.3 26-Inch
83.148	36.2	0.88	2 7	+0.9 3 0.6 36	B 758 08 09.8 -26 54				
83.146	37.0	0.83	2n	0.4 36-Inch	83.148	186.7	0.21	2 7	+0.9 3 36
I 164 08 06.2 -40 06			83.151	188.3	0.23	2 8	+0.7 3 0.2 36		
80.257	72.7	0.52	2 7	+0.6 3 1.4 36	83.150	187.5	0.22	2n	0.2 36-Inch
80.257	72.7	0.52	1n	1.4 36-Inch	Slow angular decrease.				
RST 4385 08 06.9 -05 17			6640	B 150	08 10.3 -25 05				
80.246	95.6	1.08	2 5	+0.3 3 0.3 36	83.154	40.4	0.41	2 6	+0.8 3 0.5 36
80.249	92.0	0.99	2 9	+0.1 3 0.5 36	83.184	41.2	0.41	2 7	+0.7 2 0.7 60
80.251	91.9	1.15	2 7	+0.2 3 0.5 36	83.154	40.4	0.41	1n	0.5 36-Inch
80.249	93.2	1.07	3n	0.4 36-Inch	83.184	41.2	0.41	1n	0.7 60-Inch
Direct motion.			6637	STF 1191	08 10.8 +19 02				
6606	A 2749	08 07.5 -12 12	87.194	77.3	3.47	2 7	0.0 3 0.0 26		
83.154	267.5	0.35	2 6	+0.6 3 0.4 36	87.213	77.2	3.58	4 6	0.0 3 0.3 26
83.184	269.6	0.30	2 7	+0.7 2 0.5 60	87.224	76.7	3.58	2 7	-0.2 3 0.3 26
83.154	267.5	0.35	1n	0.4 36-Inch	87.210	77.1	3.54	3n	0.2 26-Inch
83.184	269.6	0.30	1n	0.5 60-Inch	6651	FOX 64	08 11.8 -06 39		
Baize, 1981: -1.2, -0.04; +0.9, -0.09.			80.246	52.4	2.06	3 5	+0.3 3 1.0 36		
B 1586 08 08.5 -52 38			80.249	51.8	1.96	2 9	+0.1 3 0.6 36		
83.176	254.4	0.29	2 7	+0.5 2 1.4 60	80.251	50.0	2.04	2 7	+0.2 3 0.8 36
83.184	255.5	0.29	2 7	+0.2 2 1.3 60	80.249	51.4	2.02	3n	0.8 36-Inch
83.180	255.0	0.29	2n	1.4 60-Inch					

77

6650	STF 1196			08 12.2 +17 39				6653	STF 1197			08 12.8 +29 32			
76.966	297.5	0.88	2 6	0.0 4	0.3 26			78.943	102.3	1.86	2 4	0.0 3	0.4 26		
77.108	296.8	0.79	2 5	+0.2 4	0.4 26			79.181	100.9	1.87	2 6	0.0 3	0.6 26		
77.149	298.6	0.87	2 5	-0.1 3	0.3 26			79.206	101.1	1.85	2 5	+0.2 3	0.8 26		
77.169	299.6	0.84	2 6	+0.1 3	0.3 26										
78.097	290.4	0.89	2 7	-1.0 3	0.3 26			79.110	101.4	1.86	3n	0.6	26-Inch		
78.108	291.2	0.76	2 4	-0.3 3	0.7 26										
78.127	291.9	0.75	2 6	-0.2 3	0.2 26										
78.149	290.2	0.73	2 5	0.0 3	0.4 26				B 1093			08 13.0	-29 12		
78.943	286.7	0.71	2 4	-0.1 3	0.5 26										
79.181	285.7	0.89	2 6	0.0 3	0.5 26			83.173	90.2	0.41	2 5	+0.6 2	0.3 60		
79.206	285.0	0.65	2 5	+0.2 3	0.5 26			83.176	85.4	0.49	2 7	+0.8 2	0.5 60		
79.219	285.4	0.81	2 5	0.0 3	0.5 26										
80.095	277.8	0.88	2 5	-0.1 3	0.4 26			83.174	87.8	0.45	2n	0.4	60-Inch		
80.295	277.5	0.62	2 7	+0.4 3	0.5 26										
81.100	271.1	0.72	2 4	-0.5 3	0.6 26										
81.229	271.4	0.82	2 5	0.0 3	0.5 26			6664	HU 115			08 13.2	-13 54		
82.242	262.3	0.74	2 6	-0.2 3	0.5 26										
82.286	261.0	0.71	2 6	0.0 3	0.7 26			83.143	152.0	1.12	2 7	+1.2 3	0.5 36		
85.140	236.6	0.57	2 8	-0.1 4	0.4 26			83.145	152.5	1.21	2 8	+0.8 3	0.5 36		
85.162	236.1	0.62	2 6	-0.1 4	0.4 26			83.148	154.0	1.04	2 8	+1.0 3	0.5 36		
85.179	232.4	0.66	2 4	+0.1 3	26										
85.203	234.1	0.61	2 5	-0.3 3	0.5 26			83.145	152.8	1.12	3n	0.5	36-Inch		
86.230	222.8	0.62	2 6	-0.3 3	26										
86.249	224.1	0.69	2 7	-0.1 3	0.5 26										
86.252	219.4	0.61	2 7	-0.2 3	0.4 26										
86.255	222.3	0.63	2 5	-0.2 3	0.4 26										
87.114	211.4	0.61	2 8	-0.3 3	0.5 26			6670	SEE 505			08 13.3	-24 17		
87.174	212.0	0.54	2 6	-0.2 3	0.4 26										
87.194	209.8	0.61	2 7	0.0 3	0.4 26			80.246	260.0	1.41	2 5	+0.4 3	1.2 36		
87.207	211.2	0.64	2 4	-0.2 3	0.5 26			80.249	257.8	1.32	2 9	+0.2 3	1.2 36		
								80.251	257.3	1.22	2 7	+0.3 3	1.2 36		
77.098	298.1	0.84	4n	0.3	26-Inch			80.249	258.4	1.32	3n	1.2	36-Inch		
78.120	290.9	0.78	4n	0.4	26-Inch										
79.137	285.7	0.76	4n	0.5	26-Inch										
80.680	274.4	0.76	4n	0.5	26-Inch										
82.264	261.6	0.72	2n	0.6	26-Inch				I 1177			08 13.3	-41 15		
85.171	234.8	0.62	4n	0.4	26-Inch										
86.246	221.5	0.64	4n	0.4	26-Inch			80.246	144.3	1.96	2 4	+0.7 3	1.4 36		
87.172	211.1	0.60	4n	0.4	26-Inch			80.249	146.8	2.05	2 7	+0.3 3	0.8 36		
								80.251	144.1	2.04	2 5	+0.7 3	1.2 36		
Gasteyer, 1954:	+0.7,	-0.06;	-0.7,	-0.09;				80.249	145.1	2.02	3n	1.1	36-Inch		
	+0.2,	-0.08;	-1.2,	-0.03;											
	-1.9,	-0.02;	-2.8,	-0.04;											
	-4.9,	0.00;	-5.0,	-0.02.											
Increasing deviations.								6665	BU 204			08 13.6	+10 23		
								80.095	299.6	0.82	2 4	0.0 3	2.0 26		
								81.232	295.5	0.81	2 5	-0.1 3	1.8 26		
								81.267	294.7	0.87	2 7	0.0 3	1.5 26		
								80.865	296.6	0.83	3n	1.8	26-Inch		
									COU 46			08 14.9	+20 17		
								85.203	139.9	1.76	2 5	-0.2 3	0.7 26		
								85.214	137.1	1.69	2 5	-0.2 3	0.8 26		
								85.233	137.4	1.68	2 7	-0.2 3	0.5 26		
								85.217	138.1	1.71	3n	0.7	26-Inch		
								6697	A 546			08 15.5	-07 07		
								80.227	82.8	0.40	2 5	+0.4 3	60		
								80.230	82.7	0.32	2 5	+0.3 3	0.2 60		
								80.232	87.2	0.34	2 4	+0.1 3	0.2 60		
								80.230	84.2	0.35	3n	0.2	60-Inch		
Slow retrograde motion with increasing distance.															

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

FIN 115						08 15.5 -53 32						6725						STF 1213						08 17.9 +06 28					
80.240	152.8	0.36	2 8	+0.3 3	1.0 36			87.207	308.8	5.77	4 4	-0.2 3	2.0 26																
80.243	145.4	0.29	2 7	+0.4 3	0.4 36			87.213	309.7	6.31	2 7	-0.1 3	2.0 26																
80.249	151.5	0.24	2 9	+0.4 3	0.5 36			87.224	308.4	6.21	2 8	-0.3 3	0.6 26																
80.244	149.9	0.30	3n	0.6	36-Inch			87.215	309.0	6.10	3n	1.5	26-Inch																
The pair remains a puzzle.																													
RST 3578						08 15.8 -10 26						HJ 4073						08 18.2 -37 23											
80.224	157.6	0.14	2 8	+0.7 3	0.0 60			80.251	176.9	1.97	2 6	+0.8 3	0.7 36																
80.227	154.0	0.16	2 5	+0.5 3	60			80.254	176.1	2.04	2 8	+0.5 3	0.4 36																
80.226	155.8	0.15	2n	0.0	60-Inch			80.252	176.5	2.00	2n	0.6	36-Inch																
Closed in and moving rapidly.																													
BU 454						08 15.9 -30 55						6721						STF 1211						08 18.3 +38 59					
83.167	4.8	1.97	2 5	+0.1 2	1.3 60			76.966	298.3	0.29	2 6	0.0 4	0.3 26																
83.170	5.8	2.06	2 4	+0.3 2	2.0 60			77.149	302.6	0.35	2 5	0.0 3	0.0 26																
83.168	5.3	2.02	2n	1.6	60-Inch			77.169	301.6	0.30	2 6	+0.1 3	0.3 26																
												77.188	304.2	0.33	2 5	0.0 4	0.6 26												
												82.242	288.1	0.30	2 6	-0.2 3	0.0 26												
												77.118	301.7	0.32	4n	0.3	26-Inch												
												82.242	288.1	0.30	1n	0.0	26-Inch												
Baize, 1984: -2.5, +0.04; - 3.2, +0.15. Heintz, 1966: +3.3, +0.09; +16.9, +0.18. The predicted close approach has not yet occurred.																													
6707						HWE 21						JSP 257						08 18.3 -33 23											
80.251	235.8	1.46	2 7	+0.4 3	3.3 36			80.246	118.4	0.39	2 5	+0.8 3	0.0 36																
80.254	235.5	1.51	2 6	+0.7 3	3.5 36			80.249	118.0	0.46	2 9	+0.5 3	0.4 36																
80.257	237.2	1.53	2 7	+0.5 3	2.8 36			80.254	118.8	0.44	2 7	+0.4 3	0.3 36																
80.254	236.2	1.50	3n	3.2	36-Inch			80.250	118.4	0.43	3n	0.2	36-Inch																
						COO 70						6727						STF 1205						08 19.3 +56 27					
80.246	141.1	2.19	2 5	+0.7 3	0.5 36			78.943	169.6	1.64	1 5	-0.2 3	0.3 26																
80.251	140.0	2.21	2 5	+0.7 3	0.3 36			79.206	171.2	1.66	2 5	+0.1 3	0.3 26																
80.254	139.8	2.24	2 8	+0.3 3	0.6 36			79.219	170.6	1.61	2 5	0.0 3	0.4 26																
80.250	140.3	2.21	3n	0.5	36-Inch			79.123	170.5	1.64	3n	0.3	26-Inch																
6719						A 337						DAW 44						08 19.6 -40 27											
83.154	95.7	0.42	2 6	+0.9 3	0.2 36			83.167	162.0	0.58	2 5	+0.2 2	0.2 60																
83.159	96.4	0.41	2 7	+0.6 3	0.4 36			83.170	160.0	0.63	2 3	+0.4 2	60																
83.156	96.0	0.42	2n	0.3	36-Inch			83.173	158.7	0.57	2 5	+0.7 2	0.2 60																
Heintz, 1978 (1): +0.3, +0.04. (2): 0.0, +0.03.																													
6713						HU 625						83.170						150.2						08 17.5 +32 50					
82.242	354.5	1.67	2 6	-0.2 3	2.2 26			6754	A 338																				
85.162	358.2	1.83	2 6	-0.1 4	1.1 26			83.151	10.3	0.46	2 7	+0.8 3	0.3 36																
85.203	353.5	1.76	2 5	-0.2 3	1.8 26			83.154	9.1	0.47	2 6	+0.9 3	0.3 36																
84.202	355.4	1.75	3n	1.7	26-Inch			83.152	9.7	0.46	2n	0.3	36-Inch																

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

79

6749	PTT 21	08 21.2 +37 58	6776	HO 525	08 23.1 +20 01
78.943	181.5	4.70 2 4 0.0 3 0.3 26	81.267	129.9	0.22 2 7 0.0 3 0.0 26
80.095	181.7	4.65 2 5 0.0 3 0.0 26	82.242	118.7	0.27 2 5 0.0 3 26
81.232	181.6	4.69 2 6 -0.2 3 0.5 26	85.162	134.9	0.29 2 5 0.0 4 26
			85.203	131.6	0.28 2 5 -0.1 3 0.0 26
80.090	181.6	4.68 3n 0.3 26-Inch	85.233	128.9	0.29 2 7 -0.2 3 0.0 26
			81.754	124.3	0.24 2n 0.0 26-Inch
6762	STF 1216	08 21.4 -01 36	85.199	131.8	0.29 3n 0.0 26-Inch
77.281	276.3	0.49 2 6 0.0 3 0.3 26	Muller, 1978: +5.7, -0.10; +9.4, -0.07.		
77.284	277.8	0.45 2 4 0.0 3 0.3 26			
78.127	276.0	0.46 2 5 -0.2 3 0.2 26		I 1180	08 24.4 -41 31
78.149	276.7	0.49 2 4 0.0 3 26			
85.214	282.7	0.55 2 4 -0.2 3 0.3 26	80.230	35.8	0.35 2 4 +0.3 3 0.7 60
85.233	281.6	0.52 2 7 -0.1 3 0.5 26	80.232	35.3	0.33 2 4 +0.2 3 0.8 60
86.230	284.6	0.65 2 6 -0.2 3 0.5 26			
86.249	283.8	0.62 2 6 0.0 3 0.4 26	80.231	35.6	0.34 2n 0.8 60-Inch
87.114	282.5	0.55 2 6 0.0 3 0.4 26		COU 281	08 24.9 +21 49
87.174	285.4	0.50 2 5 -0.3 3 0.3 26	87.174	118.3	0.34 4 6 -0.2 3 26
87.194	286.8	0.54 2 7 -0.1 3 0.5 26	87.194	119.2	0.29 2 6 0.0 3 26
87.213	284.2	0.49 2 7 -0.1 3 0.2 26	87.213	118.5	0.31 2 8 -0.1 3 0.4 26
			87.194	118.7	0.31 3n 0.4 26-Inch
Baize,	1983: +1.5, -0.03; +0.4, +0.09; +0.5, +0.03.			RST 321	08 25.0 -49 10
	FIN 75	08 21.5 -56 26	80.227	105.6	0.24 2 5 +0.5 3 0.3 60
83.176	208.4	0.39 1 8 +0.8 2 1.0 60	80.230	104.9	0.27 2 4 +0.4 3 0.3 60
83.184	208.8	0.40 2 5 +0.9 2 60	80.232	105.5	0.31 2 4 +0.4 3 0.3 60
83.180	208.6	0.40 2n 1.0 60-Inch	83.167	131.0	0.35 2 5 +0.3 2 0.3 60
Direct motion with distance unchanged.			83.173	130.8	0.28 2 5 +0.7 2 0.3 60
			83.176	132.4	0.28 2 8 +0.8 2 0.4 60
			80.230	105.3	0.27 3n 0.3 60-Inch
6766	A 1077	08 21.8 -08 25	83.172	131.4	0.30 3n 0.3 60-Inch
80.251	83.2	0.44 2 6 +0.4 3 0.1 36	Worley, 1981: -1.8, +0.01; -3.3, -0.01.		
80.254	78.8	0.43 2 7 +0.6 3 0.1 36			
80.257	81.6	0.48 2 7 +0.6 3 0.3 36			
80.254	81.2	0.45 3n 0.2 36-Inch	6803	SCJ 9	08 25.8 +05 57
			85.214	149.9	3.55 2 5 -0.2 3 0.0 26
6780	I 797	08 22.6 -22 08	85.233	150.9	3.63 2 6 -0.1 3 0.6 26
83.145	317.1	0.47 2 7 +0.8 3 0.5 36	86.230	151.2	3.78 2 6 -0.2 3 0.2 26
83.148	316.6	0.39 2 7 +1.0 3 0.8 36	85.559	150.7	3.65 3n 0.3 26-Inch
83.146	316.8	0.43 2n 0.6 36-Inch		RST 323	08 26.0 -52 00
			83.167	285.9	0.30 2 5 +0.3 2 0.2 60
6771	A 547	08 23.0 +30 02	83.173	278.2	0.23 2 4 +0.7 2 60
78.127	244.3	1.73 2 5 -0.1 3 0.3 26	83.176	282.0	0.24 2 7 +0.9 2 0.2 60
79.181	243.3	1.83 2 6 0.0 3 0.5 26			
79.219	243.2	1.72 2 5 0.0 3 0.3 26	83.172	282.0	0.26 3n 0.2 60-Inch
78.842	243.6	1.76 3n 0.4 26-Inch	Only two earlier measures, in 1929 and 1948.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

6814	HU 714	08 27.0 +32 12			6844	A 2893			08 30.1 +05 13		
75.219	297.2	0.40	2 7	-0.2 3 0.6 26	77.207	3.3	0.56	1 4	0.0 3 0.2 26		
76.262	293.9	0.33	2 7	+0.1 4 0.7 26	77.278	0.3	0.60	2 5	0.0 3 0.0 26		
76.966	298.2	0.41	3 5	0.0 4 0.4 26	77.281	0.6	0.65				26
77.108	297.1	0.41	2 5	+0.1 4 0.8 26	78.064	1.4	0.60	1 6	0.0 3 0.1 26		
					87.213	1.2	0.66	1 7	0.0 3 0.2 26		
76.396	296.6	0.39	4n	0.6 26-Inch	87.224	2.8	0.62	1 6	-0.2 3 0.5 26		
					87.232	359.8	0.68	3 4	0.0 3 26		
Baize, 1984: +2.2, -0.01.					87.273	359.1	0.66	2 8	-0.2 3 0.3 26		
					77.458	1.4	0.60	4n	0.1 26-Inch		
					87.236	0.7	0.66	4n	0.3 26-Inch		
	FIN 116	08 27.5 -55 01									
83.167	62.3	0.21	2 5	+0.5 2 0.0 60	6847	B 158			08 30.4 -26 02		
83.173	68.8	0.20	2 5	+0.9 2 0.0 60	83.145	38.8	0.99	2 6	+0.9 3 0.0 36		
83.184	63.8	0.19	2 6	+0.9 2 0.0 60	83.151	39.2	0.93	2 8	+0.8 3 0.2 36		
83.175	65.0	0.20	3n	0.0 60-Inch	83.148	39.0	0.96	2n	0.1 36-Inch		
6831	OL 62	08 28.5 -19 47			6851	HU 716			08 31.6 +34 58		
83.154	180.4	0.80	2 5	+0.9 3 0.6 36	77.169	57.8	0.27	1 7	0.0 3 1.5 26		
83.159	177.0	0.80	2 8	+0.6 3 0.3 36	77.193	58.1	0.33	3 6	-0.2 3 1.8 26		
					77.278	42.4	0.25	4 5	0.0 3 1.2 26		
83.156	178.7	0.80	2n	0.4 36-Inch	77.281	46.1	0.23	1 6	0.0 3 1.5 26		
					78.064	34.0	0.24	2 6	+0.1 3 1.8 26		
					81.232	0.4	0.19	2 6	-0.2 3 26		
					81.267	0.4	0.20	2 6	-0.1 4 1.8 26		
	WOR 19	08 28.6 +35 02			77.230	51.2	0.27	4n	1.5 26-Inch		
85.233	249.9	0.66	2 7	-0.1 3 0.2 26	78.064	34.0	0.24	1n	1.8 26-Inch		
86.252	229.4	0.73	2 7	0.0 3 26	81.145	0.4	0.20	2n	1.8 26-Inch		
86.255	236.2	0.52	2 5	-0.1 3 26							
87.174	239.7	0.61	2 6	-0.4 3 0.3 26	Baize, 1972: -4.2, -0.01; -14.0, -0.02; -3.6, +0.02.						
86.228	238.8	0.63	4n	0.2 26-Inch							
Couteau, 1982: -1.8, -0.04.											
Difficult in the bright Washington sky.											
	RST 329	08 28.8 -48 11			6864	HU 717			08 32 6 +32 28		
80.240	106.6	0.30	2 8	+0.3 3 0.3 36	75.249	58.0	0.31	2 7	-0.2 3 0.2 26		
80.243	106.6	0.31	2 7	+0.3 3 0.3 36	76.262	67.0	0.30	2 7	+0.1 4 0.3 26		
80.249	105.6	0.29	2 9	+0.4 3 0.0 36	76.966	57.7	0.32	2 5	0.0 4 0.2 26		
83.167	107.5	0.32	2 5	+0.6 2 0.3 60	77.169	60.9	0.34	2 7	0.0 3 0.2 26		
83.170	107.6	0.34	2 5	+1.0 2 0.3 60	76.412	60.9	0.32	4n	0.2 26-Inch		
80.244	106.3	0.30	3n	0.2 36-Inch							
83.170	107.6	0.33	2n	0.3 60-Inch	6871	BU 205			08 33.1 -24 36		
					80.243	350.4	0.50	2 7	+0.3 3 0.3 36		
					80.249	349.9	0.45	2 9	+0.4 3 0.3 36		
					80.254	349.8	0.49	2 7	+0.6 3 0.2 36		
					80.249	350.0	0.48	3n	0.3 36-Inch		
					Heintz, 1979: +0.6, -0.07.						
6836	B 156	08 29.0 -25 34				FIN 119			08 34.1 -62 56		
83.145	348.1	0.31	2 6	+0.8 3 0.2 36	80.240	171.7	0.48	2 8	+0.3 3 0.3 36		
83.151	348.3	0.31	2 8	+0.7 3 0.2 36	80.243	171.8	0.40	2 7	+0.7 3 0.3 36		
83.154	348.1	0.34	2 6	+1.0 3 0.1 36	80.251	167.0	0.47	2 6	+0.6 3 0.0 36		
83.150	348.2	0.32	3n	0.2 36-Inch	80.245	170.2	0.45	3n	0.2 36-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

81

FIN 335				08 34.5 -32 36				B 1623				08 39.2 -40 25			
83.151	84.7	0.18	3 7	+0.9 3	0.0 36			80.240	257.0	0.65	2 8	+0.4 3	0.8 36		
83.159	80.9	0.20	2 7	+0.7 3	0.0 36			80.243	255.2	0.67	2 7	+0.8 3	0.5 36		
83.155	82.8	0.19	2n	0.0	36-Inch			80.242	256.1	0.66	2n	0.6	36-Inch		
Heintz, 1984: -16.7, 0.00.															
B 1616				08 35.0 -43 41				COU 47				08 39.8 +20 05			
80.224	127.8	0.17	2 7	+0.6 3	60			85.203	131.6	0.50	2 5	-0.3 3	0.8 26		
80.227	120.0	0.15	2 5	+0.4 3	60			85.233	143.8	0.42	2 7	-0.1 3	1.1 26		
83.151	113.0	0.20	2 7	+1.0 3	0.2 36			86.249	138.3	0.47	2 6	-0.3 3	0.8 26		
83.176	115.8	0.17	2 7	+0.9 2	0.3 60			86.252	139.0	0.52	4 7	-0.1 3	1.0 26		
83.184	120.7	0.17	2 6	+0.8 2	0.2 60			85.734	138.2	0.48	4n	0.9	26-Inch		
80.226	123.9	0.16	2n		60-Inch			6925	A 3064			08 40.3 -15 18			
83.151	113.0	0.20	1n	0.2	36-Inch			80.230	2.3	0.71	2 3	+0.6 3	0.0 60		
83.180	118.2	0.17	2n	0.2	60-Inch			80.257	2.3	0.57	2 6	+0.4 3	0.2 36		
B 2184				08 38.0 -38 40				80.230				2.3 0.71			
80.230	195.2	2.28	2 4	+0.3 3	0.8 60			80.257	2.3	0.57	1n	0.0	60-Inch		
80.232	195.3	2.23	2 5	+0.2 3	0.4 60						1n	0.2	36-Inch		
80.231	195.2	2.26	2n	0.6	60-Inch			6926	A 2750			08 40.7 +00 47			
6899 HU 858 08 38.2 +11 58															
78.127	160.3	0.64	1 5	-0.2 3	0.7 26			73.237	339.2	0.78	1 7	-0.1 3	2.0 26		
81.267	51.1	0.82	2 5	-0.1 4	1.0 26			75.249	338.1	0.65	1 6	-0.3 3	1.5 26		
82.286	149.3	0.74	2 6	0.0 3	0.8 26			77.169	339.0	0.89	1 6	0.0 3	2.0 26		
80.560	153.6	0.73	3n	0.8	26-Inch			77.281	340.0	0.54	1 6	0.0 3	1.3 26		
No measures since 1922. Increase in angle and decrease in separation.															
75.734	339.1	0.72	4n	1.7	26-Inch										
B 1621				08 38.8 -33 52				6930 BU 585				08 41.3 +20 29			
80.240	349.8	0.53	2 8	+0.4 3	0.4 36			77.193	90.2	0.44	2 6	-0.2 3	1.0 26		
80.243	350.2	0.51	2 7	+0.7 3	0.3 36			77.207	92.8	0.45	2 5	0.0 3	1.2 26		
83.167	350.4	0.57	2 5	+0.5 2	0.4 36			77.278	88.6	0.49	2 5	0.0 3	1.1 26		
83.176	350.8	0.49	2 8	+0.9 2	0.4 36			77.281	92.3	0.45	2 6	-0.1 3	1.2 26		
80.242	350.0	0.52	2n	0.4	36-Inch			77.240	91.0	0.46	4n	1.1	26-Inch		
83.172	350.6	0.53	2n	0.4	60-Inch			6931	KU 32			08 41.3 +19 16			
6914 BU 2 8 08 39.2 -22 40															
80.240	335.4	0.19	2 9	+0.7 3	36			79.219	168.2	2.14	1 5	-0.2 3	2.0 26		
80.243	332.7	0.20	2 7	+0.3 3	36			82.286	162.9	2.07	2 6	+0.1 3	2.6 26		
80.254	324.7	0.17	1 8	+0.6 3	36			85.162	166.2	1.98	2 5	-0.3 4	1.2 26		
83.143	19.1	0.30	2 8	+0.9 3	0.6 36			82.222	165.8	2.06	3n	1.9	26-Inch		
83.145	18.3	0.31	2 7	+1.0 3	0.8 36										
83.148	17.4	0.33	2 8	+0.9 3	1.0 36			I 315				08 42.0 -42 35			
80.246	330.9	0.19	3n		36-Inch			80.230	172.6	0.76	2 4	+0.4 3	0.2 60		
83.145	18.3	0.33	3n	0.8	36-Inch			80.232	169.4	0.71	2 5	+0.1 3	0.2 60		
Newburg, 1968: -19.3, -0.05; +4.4, -0.18.															
Baize, 1985: -24.4, -0.09; +4.4, -0.22.															
80.231	171.0	0.74	2n	0.2	60-Inch			83.167	172.8	0.82	2 4	+0.6 2	0.3 60		
83.170	172.1	0.80	2n	0.2	60-Inch			83.173	171.4	0.77	2 4	+0.8 2	0.2 60		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

B 1624					08 42.1 -52 46					6948					MLB 123					08 44.1 +54 45									
80.224	333.6	0.21	2 7	+0.7 3	60							79.206	27.4	1.99	2 5	0.0 3	0.3 26												
80.227	330.8	0.13	2 5	+0.5 3	60							79.219	27.2	2.10	2 5	0.0 3	26												
80.232	342.0	0.15	2 5	+0.3 3	60							81.232	26.1	2.09	2 5	-0.3 3	0.4 26												
80.228	335.5	0.16	3n		60-Inch							79.886	26.9	2.06	3n	0.4	26-Inch												
Heintz, 1969: +13.8, -0.01.																													
6942					HO 354					08 42.8 +26 04					6976					A 2548					08 45.4 -00 13				
86.230	186.2	1.13	2 6	-0.2 3	1.0 26							81.232	24.1	0.25	2 5	0.0 3	26												
86.249	186.4	1.12	2 6	-0.2 3	1.0 26							81.232	24.1	0.25	1n		26-Inch												
86.252	182.4	1.10	2 7	-0.1 3	1.5 26																								
86.244	185.0	1.12	3n	1.2	26-Inch																								
6949					HO 355					08 42.9 -02 42					6982					HU 119					08 45.4 -14 07				
77.193	158.0	0.59	3 5	-0.2 3	0.0 26																								
77.278	161.0	0.63	1 5	+0.1 3	0.0 26																								
77.281	160.7	0.60	1 6	+0.1 3	0.0 26																								
77.251	159.9	0.61	3n	0.0	26-Inch																								
					RST 3603					08 43.2 -12 26																			
80.227	36.0	0.19	2 6	+0.6 3	0.0 60																								
80.232	33.8	0.23	2 6	+0.4 3	0.3 60																								
83.154	26.2	0.27	2 6	+0.9 3	0.1 36																								
83.159	30.7	0.22	2 8	+0.7 3	0.3 36																								
80.230	34.9	0.21	2n	0.2	60-Inch																								
83.156	28.4	0.24	2n	0.2	36-Inch																								
Heintz, 1978: +20.1, -0.02; +27.0, -0.02.																													
6961					R 165					08 43.7 -24 43																			
80.246	14.7	0.41	2 5	+0.7 3	0.5 36																								
80.249	14.6	0.33	2 9	+0.5 3	0.4 36																								
80.248	14.6	0.37	2n	0.4	36-Inch																								
6965					R 166					08 43.8 -26 39																			
80.249	62.9	2.14	2 8	+0.5 3	3.4 36																								
80.251	62.5	2.36	2 6	+0.6 3	4.0 36																								
80.250	62.7	2.25	2n	3.7	36-Inch																								
6960					A 2547					08 44.0 +02 45					6980					KR 30					08 46.9 +57 42				
75.249	98.7	0.23	2 6	-0.3 3	0.8 26																								
77.281	104.2	0.18	2 6	+0.2 3	0.8 26																								
76.265	101.4	0.20	2n	0.8	26-Inch																								

83

	SLR 9		08 47.2 -63 49		COU 588		08 51.4 +21 05
83.173	357.0	1.31	2 5 +0.9 2 0.8 60	85.179	338.3	0.38	2 5 -0.3 3 0.4 26
83.184	359.6	1.24	2 8 +0.9 2 0.9 60	86.230	345.5	0.39	2 5 -0.2 3 0.3 26
				86.249	336.4	0.39	2 6 -0.2 3 26
83.178	358.3	1.28	2n 0.8 60-Inch	86.252	340.3	0.46	2 7 -0.1 3 0.2 26
				85.978	340.1	0.40	4n 0.3 26-Inch
7007	ES 294		08 49.2 +36 09	7049	STF 1287		08 51.5 +12 08
76.966	163.6	2.05	2 5 -0.2 4 0.2 26	77.185	89.6	2.14	2 4 -0.2 3 2.2 26
77.108	166.2	1.97	2 5 -0.3 4 0.3 26	77.188	89.7	2.08	2 6 -0.2 4 2.2 26
77.133	164.9	1.94	2 7 0.0 3 0.1 26	77.193	90.4	2.10	2 7 -0.2 3 2.0 26
				77.207	90.6	2.14	2 5 0.0 3 2.0 26
77.069	164.9	1.99	3n 0.2 26-Inch	77.193	90.1	2.12	4n 2.1 26-Inch
7016	STF 1271		08 50.1 +56 13	7050	BU 587		08 51.6 -07 10
77.108	82.2	1.16	2 4 -0.1 4 1.0 26	80.251	129.0	1.36	2 6 +0.6 3 2.0 36
77.169	82.7	1.23	2 7 0.0 3 1.0 26	80.254	127.0	1.27	2 8 +0.5 3 2.7 36
77.185	84.2	1.22	2 4 -0.5 3 1.1 26	80.257	127.8	1.17	2 6 +0.4 3 2.6 36
77.188	82.0	1.18	2 5 -0.4 4 1.0 26	80.254	127.9	1.27	3n 2.4 36-Inch
77.162	82.8	1.20	4n 1.0 26-Inch	7053	BU 407		08 51.7 -06 47
				79.206	166.5	6.04	1 4 0.0 3 2.5 26
				82.286	164.7	5.87	1 5 +0.1 3 2.0 26
7039	A 2473		08 50.7 +18 01	80.746	165.6	5.96	2n 2.2 26-Inch
85.179	230.7	0.30	2 5 -0.2 3 0.0 26	Not measured since 1915. Unchanged.			
85.203	230.0	0.28	2 6 -0.4 3 0.0 26				
85.233	226.5	0.30	2 6 -0.2 3 0.0 26				
85.294	231.5	0.31	2 5 0.0 3 26				
85.227	229.7	0.30	4n 0.0 26-Inch				
Scardia, 1984: +0.7, -0.02.							
						</	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

COU 1251				08 53.7 +29 08				7067				STF 1280				08 55.9 +70 48			
86.249	184.7	0.59	2 6 -0.1 3 0.6 26					77.108	107.0	1.28	2 4 -0.1 4 0.1 26								
86.252	182.4	0.62	2 7 +0.2 3 0.3 26					77.149	107.9	1.40	2 5 -0.5 3 0.2 26								
86.255	181.7	0.57	2 5 -0.3 3 0.3 26					77.169	107.2	1.45	2 7 +0.1 3 0.1 26								
87.174	184.0	0.57	2 6 -0.2 3 0.5 26					77.185	106.0	1.45	2 5 -0.5 3 0.2 26								
86.252	182.9	0.59	3n 0.4 26-Inch					85.140	136.9	1.16	4 7 +0.1 4 0.3 26								
								85.162	136.7	1.17	2 5 -0.4 4 0.2 26								
								85.179	138.3	1.10	2 5 -0.5 3 0.2 26								
								85.203	135.2	1.08	2 6 -0.1 3 0.3 26								
								87.174	148.5	1.05	2 6 -0.4 3 0.2 26								
								87.194	146.2	1.01	2 7 -0.4 3 0.4 26								
								87.213	147.3	1.02	2 7 -0.4 3 0.2 26								
								87.232	147.7	1.03	2 5 -0.3 3 0.3 26								
								77.153	107.0	1.40	4n 0.1 26-Inch								
								85.171	136.8	1.13	4n 0.2 26-Inch								
								87.203	147.4	1.03	4n 0.3 26-Inch								
								Heintz, 1974: -0.8, +0.04; -2.6, +0.01; -1.8, -0.06.											
								Rapid motion near periastron.											
7071	STF 1291			08 54.3 +30 34			7102	A 2968			08 57.1 +10 45								
78.127	314.9	1.36	2 6 -0.2 3 0.4 26				77.207	134.4	1.14	2 5 0.0 3 0.1 26									
78.149	315.2	1.37	2 5 0.0 3 0.2 26				77.281	135.4	1.18	2 7 0.0 3 0.1 26									
78.239	316.7	1.32	2 4 0.0 3 0.3 26				78.149	134.1	1.12	2 5 +0.1 3 0.1 26									
78.242	316.0	1.41	2 5 -0.3 3 0.2 26				77.546	134.6	1.15	3n 0.1 26-Inch									
87.174	312.3	1.45	2 7 -0.3 3 0.3 26				7113	A 1974			08 58.7 +25 23								
87.194	313.5	1.42	2 7 -0.3 3 0.0 26				75.249	215.9	0.22	1 7 -0.4 3 0.0 26									
87.213	314.8	1.50	2 6 -0.2 3 0.0 26				76.262	220.6	0.19	2 5 0.0 4 0.0 26									
87.232	314.8	1.46	2 5 -0.4 3 0.0 26				77.108	224.8	0.24	2 5 0.0 3 0.0 26									
							77.188	212.5	0.25	2 5 -0.2 4 0.0 26									
78.189	315.7	1.36	4n 0.3 26-Inch				76.452	218.4	0.22	4n 0.0 26-Inch									
87.203	313.8	1.46	4n 0.1 26-Inch				7117	HU 861			08 58.7 +14 14								
							77.281	22.6	0.27	1 7 +0.1 3 0.4 26									
							78.149	24.5	0.27	2 5 +0.2 3 0.3 26									
							79.181	27.9	0.24	2 6 -0.2 3 0.0 26									
							78.204	25.0	0.26	3n 0.2 26-Inch									
7080	BU 24			08 54.3 -08 46			7118	STF 1296			08 59.3 +34 57								
80.251	175.3	1.13	1 6 +0.6 3 1.2 36				85.179	75.9	1.94	2 4 0.0 3 0.4 26									
80.254	175.4	1.24	1 8 +0.6 3 0.7 36				85.203	74.6	1.92	2 5 0.0 3 0.4 26									
80.257	175.1	1.22	1 7 +0.5 3 1.0 36				85.214	73.7	1.95	2 4 -0.4 3 0.5 26									
80.254	175.3	1.20	3n 1.0 36-Inch				85.199	74.7	1.94	3n 0.4 26-Inch									
							7131	HU 225			09 00.1 -12 27								
7082	A 2131			08 54.9 +26 13			80.224	222.0	0.33	2 6 +0.6 3 0.2 60									
77.133	145.5	0.22	1 8 +0.1 3 1.0 26				80.227	221.6	0.33	2 5 +0.4 3 0.2 60									
77.193	133.2	0.25	3 7 -0.1 3 1.4 26				83.143	228.8	0.33	2 7 +1.0 3 0.0 36									
77.281	142.8	0.22	1 6 0.0 3 1.5 26				83.145	227.7	0.41	2 7 +1.2 3 0.3 36									
81.232	179.1	0.32	2 6 0.0 3 1.0 26				83.148	225.8	0.32	2 8 +1.2 3 0.2 36									
82.286	179.5	0.34	2 7 -0.5 3 1.2 26				80.226	221.8	0.33	2n 0.2 60-Inch									
86.255	196.6	0.35	2 6 -0.2 3 1.0 26				83.145	227.4	0.35	3n 0.2 36-Inch									
87.174	197.3	0.35	2 7 -0.2 3 1.0 26				Worley, 1981: -3.4, 0.00; -7.8, 0.00												
87.194	201.2	0.35	2 6 -0.3 3 1.0 26																
87.213	199.1	0.37	2 6 0.0 3 1.5 26																
77.202	140.5	0.23	3n 1.3 26-Inch																
81.759	179.3	0.33	2n 1.1 26-Inch																
86.957	198.6	0.36	4n 1.1 26-Inch																
								Baize, 1980: +1.2, 0.00; +5.1, 0.00; -0.6, -0.01.											
																	</		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

85

7124	HU 718	09 00.5 +32 25		7158	A 1585	09 03.6 +47 09
79.219	96.0	0.19	2 5 -0.1 3 0.0 26	77.149	291.8	0.32 3 5 0.0 3 0.3 26
80.295	91.0	0.20	2 7 +0.1 3 0.0 26	77.169	288.1	0.29 1 7 0.0 3 0.3 26
82.286	87.2	0.18	2 6 +0.3 3 0.0 26	77.185	288.4	0.28 2 5 -0.2 3 0.3 26
				77.188	286.6	0.28 3 6 -0.2 4 0.4 26
80.600	91.4	0.19	3n 0.0 26-Inch	77.173	288.7	0.29 4n 0.3 26-Inch
Baize, 1984: +6.2, 0.00.				Morel, 1970: +0.6, +0.03.		
				Docobo, Costa, 1987(1): 0.9, +0.02.		
				(2): -0.9, +0.01.		
	KUI 37	09 00.8 +41 48			RST 2599	09 04.4 -33 06
77.149	58.8	0.52	4 5 -0.1 3 2.0 26			
77.169	62.0	0.56	1 7 -0.2 3 2.2 26	83.167	299.1	0.18 2 5 +0.5 2 60
77.193	61.0	0.47	1 7 0.0 3 1.8 26	83.173	294.8	0.18 2 4 +0.9 2 60
77.278	60.3	0.55	1 6 -0.1 3 2.2 26	83.184	293.6	0.14 2 8 +0.8 2 60
78.064	42.3	0.56	1 7 0.0 3 2.2 26			
79.181	30.4	0.72	2 5 -0.3 3 1.8 26	83.175	295.8	0.17 3n 60-Inch
79.219	37.8	0.51	2 5 -0.2 3 2.5 26	Closed in.		
80.295	26.4	0.60	1 7 0.0 3 2.0 26			
81.232	17.2	0.91	1 5 0.0 3 2.5 26	7168	HU 123	09 06.4 +63 02
82.286	13.4	0.75	3 6 -0.4 3 1.8 26			
85.233	335.0	0.54	2 6 -0.1 3 1.8 26	76.262	231.9	0.64 2 7 0.0 4 0.3 26
85.294	332.4	0.63	2 4 -0.1 3 2.0 26	77.133	227.2	0.66 2 6 +0.2 3 0.2 26
86.249	313.2	0.47	3 6 -0.1 3 1.8 26	77.169	230.4	0.70 2 6 0.0 3 0.3 26
86.252	313.4	0.51	1 7 -0.1 3 2.0 26			
86.255	320.5	0.46	1 6 -0.2 3 2.0 26	76.855	229.8	0.67 3n 0.3 26-Inch
87.174	292.9	0.53	2 7 -0.1 3 2.0 26			
87.194	297.9	0.41	1 6 -0.2 3 2.0 26		I 492	09 07.7 -44 38
87.213	294.3	0.55	2 6 -0.4 3 1.7 26	83.167	142.2	0.29 2 5 +0.6 2 0.7 60
87.273	295.6	0.46	2 8 0.0 3 2.0 26	83.170	145.2	0.35 2 4 +0.5 2 60
77.197	60.5	0.52	4n 2.0 26-Inch	83.168	143.7	0.32 2n 0.7 60-Inch
78.821	36.8	0.60	3n 2.2 26-Inch			
81.271	19.0	0.75	3n 2.1 26-Inch		FIN 24	09 07.9 -34 07
85.264	333.7	0.58	2n 1.9 26-Inch	83.176	42.7	1.31 2 7 +0.8 2 0.3 60
86.252	315.7	0.48	3n 1.9 26-Inch	83.184	44.2	1.30 2 8 +0.8 2 0.7 60
87.214	295.2	0.49	4n 1.9 26-Inch			
Heintz, 1967: +1.2, -0.02; -2.1, -0.04;				83.180	43.4	1.30 2n 0.5 60-Inch
+3.5, +0.06; +1.8, +0.04;						
-0.3, -0.01; -2.7, +0.03.						
7149	A 3071	09 01.7 -08 33		7205	B 177	09 08.2 -28 29
80.251	154.4	1.13	2 6 +0.6 3 0.0 36	80.240	192.3	0.17 2 8 +0.4 3 36
80.254	152.8	1.20	2 8 +0.6 3 0.1 36	80.243	198.4	0.16 2 7 +0.5 3 36
80.257	154.8	1.14	2 7 +0.3 3 0.2 36	80.246	199.0	0.21 2 5 +0.6 3 36
83.154	155.0	1.21	2 7 +0.7 3 0.2 36	83.154	204.5	0.18 2 6 +0.7 3 36
83.159	153.1	1.20	2 8 +0.5 3 0.1 36	83.159	201.3	0.16 2 8 +0.5 3 36
80.254	154.0	1.16	3n 0.1 36-Inch	80.243	196.6	0.18 3n 36-Inch
83.156	154.0	1.20	2n 0.2 36-Inch	83.156	202.9	0.17 2n 36-Inch
7147	STF 1301	09 01.9 +26 13			ALD 42	09 08.4 -43 45
86.230	0.1	10.24	2 5 -0.1 3 0.3 26	83.167	214.2	2.56 1 5 +0.7 2 1.4 60
86.249	0.3	10.21	2 6 0.0 3 0.3 26	83.173	210.9	2.56 2 5 +0.9 2 1.2 60
86.252	358.3	10.19	1 7 +0.1 3 0.3 26	83.184	212.6	2.47 2 8 +0.9 2 0.8 60
86.244	359.6	10.21	3n 0.3 26-Inch	83.175	212.6	2.53 3n 1.1 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

7219	B 178	09 09.6 -28 29	7242	A 2974	09 12.9 +10 40
80.224	94.2 0.33	2 7 +0.7 3 0.1 60	77.281	56.5 1.69	2 7 0.0 3 3.5 26
80.232	91.3 0.21	2 6 +0.1 3 0.5 60	79.181	57.5 1.85	2 6 -0.2 3 3.5 26
80.228	92.8 0.27	2n 0.3 60-Inch	79.219	52.5 1.67	2 5 +0.1 3 3.4 26
			78.560	55.5 1.74	3n 3.5 26-Inch
7223	B 179	09 10.0 -28 45	Increase in angle and separation.		
80.224	186.0 0.51	2 6 +0.6 3 0.2 60	7245	AG 163	09 13.6 +24 03
80.232	187.4 0.53	2 6 +0.2 3 0.2 60	85.179	321.4 5.14	2 5 -0.2 3 0.5 26
83.143	185.1 0.53	2 7 +1.0 3 0.2 36	85.203	320.0 5.15	2 5 -0.1 3 0.1 26
83.154	182.4 0.47	2 4 +1.9 3 36	85.233	319.7 5.09	2 5 -0.2 3 0.1 26
83.159	185.1 0.58	2 7 +0.6 3 0.2 36	85.205	320.4 5.13	3n 0.2 26-Inch
80.228	186.7 0.52	2n 0.2 60-Inch			
83.152	184.2 0.53	3n 0.2 36-Inch			
Costa, Docobo, 1983: +3.3, +0.04; +3.3, +0.04.			7229	STF 1313	09 13.7 +69 58
7203	STF 1306	09 10.4 +67 08	77.149	275.9 1.15	2 5 0.0 3 0.2 26
77.149	5.1 3.17	1 5 0.0 3 3.8 26	77.169	276.5 1.09	2 6 +0.2 3 0.0 26
77.169	6.5 3.12	1 7 +0.1 3 4.2 26	77.185	275.8 1.09	2 4 0.0 3 0.2 26
77.185	5.0 3.19	1 4 -0.1 3 4.2 26	77.188	275.5 1.09	2 5 0.0 4 0.0 26
77.188	5.4 3.15	1 6 -0.2 4 4.2 26	85.140	274.9 1.07	2 7 0.0 4 0.0 26
85.162	358.5 3.29	2 4 -0.5 4 3.0 26	85.162	281.2 1.06	2 4 -0.6 4 26
85.179	359.2 3.39	2 5 -0.6 3 3.2 26	85.179	279.1 1.02	2 5 -0.6 3 0.2 26
85.203	359.0 3.25	2 6 -0.1 3 3.0 26	85.203	277.4 1.01	2 5 -0.2 3 0.0 26
77.173	5.5 3.16	4n 4.1 26-Inch	77.173	275.9 1.10	4n 0.1 26-Inch
85.181	358.9 3.31	3n 3.1 26-Inch	85.171	278.2 1.04	4n 0.1 26-Inch
Baize, 1948: +0.9, +0.05; +2.8, -0.08. Scardia, 1985: +5.4, +0.16; -1.5, +0.02. The later orbit is hardly an improvement.			7257	BU 455	09 14.8 +04 13
7225	I 824	09 11.0 -19 29	77.207	69.3 1.93	2 4 0.0 3 1.6 26
80.240	62.1 0.21	2 8 +0.5 3 0.3 36	77.278	69.8 1.88	2 5 -0.1 3 1.6 26
80.243	66.8 0.20	2 8 +0.5 3 36	77.281	70.0 1.83	2 6 0.0 3 0.5 26
80.246	68.3 0.23	2 5 +0.4 3 36	77.255	69.7 1.88	3n 1.2 26-Inch
80.243	65.7 0.21	3n 0.3 36-Inch			
7240	A 2973	09 12.4 -06 56	7262	A 2754	09 15.3 +06 01
80.251	12.3 3.01	1 7 +0.5 3 4.2 36	77.207	0.4 1.05	1 4 0.0 3 1.0 26
80.254	11.0 2.89	1 8 +0.5 3 4.5 36	77.278	0.1 1.22	1 5 -0.1 3 1.0 26
80.257	12.3 3.00	1 7 +0.4 3 3.2 36	77.281	0.3 1.06	1 6 0.0 3 0.6 26
80.254	11.9 2.97	3n 4.0 36-Inch	77.255	0.3 1.11	3n 0.9 26-Inch
7236	STF 1322	09 12.7 +16 31	7269	A 1756	09 16.1 -00 58
77.188	53.8 1.79	2 5 0.0 4 0.0 26	80.295	152.7 0.62	1 6 0.0 3 1.2 26
77.193	54.2 1.70	2 6 0.0 3 0.2 26	80.295	152.7 0.62	1n 1.2 26-Inch
77.207	55.8 1.79	2 5 -0.1 3 0.2 26			
77.278	54.4 1.77	2 5 -0.2 3 0.4 26	7249	STF 1305	09 17.6 +79 48
77.216	54.6 1.76	4n 0.2 26-Inch	79.206	5.6 1.59	1 4 -0.2 3 0.6 26
			86.252	0.9 1.51	1 6 -0.2 3 0.4 26
			87.232	0.9 1.64	2 4 -0.5 3 0.8 26
			84.230	2.5 1.58	3n 0.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

87

7284	STF 3121	09 17.9 +28 35
77.108	51.5	0.26 2 5 +0.1 3 0.2 26
77.133	50.1	0.30 2 7 +0.1 3 0.0 26
77.149	52.2	0.31 2 5 -0.8 3 0.0 26
77.169	46.7	0.30 3 7 +0.2 3 0.0 26
78.064	77.2	0.19 2 6 -0.1 3 0.0 26
78.127	76.7	0.20 2 5 -0.3 3 0.0 26
78.149	75.9	0.18 2 5 0.0 3 0.0 26
79.181	129.8	0.12 2 6 -0.3 3 26
79.219	127.0	0.15 2 6 0.0 3 26
80.095	179.3	0.21 2 6 -0.2 3 26
80.295	178.7	0.24 2 7 -0.1 3 0.0 26
81.232	194.7	0.30 2 6 -0.2 3 0.1 26
82.286	200.4	0.44 2 5 +0.1 3 0.0 26
82.313	201.2	0.43 2 7 +0.4 3 0.2 26
82.324	200.4	0.50 2 3 0.0 3 26
82.327	197.7	0.46 2 5 +0.2 3 0.2 26
85.140	209.0	0.45 2 7 0.0 4 0.2 26
85.179	212.6	0.43 2 4 -0.1 3 0.2 26
85.203	212.5	0.52 2 5 -0.1 3 0.0 26
85.233	208.5	0.57 2 5 -0.2 3 0.2 26
86.230	214.1	0.57 2 5 -0.2 3 26
86.249	215.6	0.50 2 5 -0.1 3 26
86.252	216.2	0.43 2 7 +0.2 3 0.0 26
86.255	219.3	0.56 2 5 -0.3 3 26
87.174	221.8	0.39 2 7 -0.1 3 0.0 26
87.194	225.7	0.36 2 7 -0.4 3 0.0 26
87.213	223.4	0.40 2 6 -0.1 3 0.0 26
87.232	222.1	0.36 2 6 -0.1 3 0.1 26
77.140	50.1	0.29 4n 0.0 26-Inch
78.113	76.6	0.19 3n 0.0 26-Inch
79.200	128.9	0.14 2n 26-Inch
80.195	179.0	0.22 2n 0.0 26-Inch
82.096	198.9	0.43 5n 0.1 26-Inch
85.189	210.6	0.49 4n 0.1 26-Inch
86.246	216.3	0.52 4n 0.0 26-Inch
87.203	223.2	0.38 4n 0.0 26-Inch

van den Bos, 1938: +7.4, -0.03;
+18.7, 0.00;
+5.8, +0.04;
+3.1, +0.02;
+0.7, +0.02;
-2.8, +0.02;
-2.3, +0.09;
-1.2, +0.01.

KUI 39	09 18.1 +77 15
75.249	201.2 0.83 1 7 -0.3 3 0.1 26
76.262	202.3 0.73 1 7 -0.1 4 0.1 26
77.133	203.7 0.73 1 7 +0.1 3 0.3 26
77.169	201.9 0.78 1 6 +0.2 3 0.2 26
85.140	181.1 0.72 2 7 0.0 4 0.2 26
86.252	181.2 0.69 1 6 0.0 3 0.1 26
87.232	171.9 0.65 1 5 -0.4 3 26
87.273	179.5 0.66 1 8 0.0 3 26
76.453	202.3 0.77 4n 0.2 26-Inch
86.474	178.4 0.68 4n 0.2 26-Inch

Baize, 1973: +1.2, +0.04; -1.5, +0.02.
Heintz, 1974: +1.1, +0.10; +4.6, +0.08.

The later orbit is no improvement.

7287	A 1757	09 18.1 -01 22
79.206	101.8	1.16 2 3 -0.2 3 1.2 26
81.232	100.9	1.36 2 4 -0.1 3 1.3 26
80.219	101.4	1.26 2n 1.2 26-Inch
7289	A 2556	09 18.2 +02 45
77.193	336.4	0.83 1 6 0.0 3 0.3 26
77.278	338.1	0.92 2 5 0.0 3 0.6 26
79.181	337.5	0.99 1 6 -0.2 3 0.5 26
77.884	337.3	0.91 3n 0.5 26-Inch
7288	A 221	09 18.6 +29 45
77.133	275.8	0.23 2 6 +0.2 3 26
77.193	278.5	0.30 2 5 0.0 3 0.0 26
77.281	275.1	0.22 2 6 0.0 3 0.2 26
77.202	276.5	0.25 3n 0.1 26-Inch
Has rapidly closed in since this measure.		
7316	A 1082	09 20.6 -07 41
80.249	32.4	0.23 2 9 +0.1 3 0.8 36
80.251	25.2	0.23 2 7 +0.4 3 36
80.254	27.2	0.20 2 8 +0.5 3 0.6 36
80.251	28.3	0.22 3n 0.7 36-Inch
Rapid motion in the last decade.		
7318	I 198	09 20.7 -29 13
80.224	54.4	0.15 2 7 +0.7 3 60
80.232	54.6	0.13 2 6 +0.4 3 60
80.228	54.5	0.14 2n 60-Inch
7307	STF 1338	09 21.0 +38 12
80.295	255.8	0.99 2 7 0.0 3 0.2 26
81.232	260.5	1.12 2 5 0.0 3 0.4 26
82.324	262.5	1.02 2 3 0.0 3 0.3 26
82.327	259.9	1.04 2 5 +0.1 3 0.3 26
85.140	263.7	0.97 2 8 0.0 4 0.2 26
85.179	264.5	0.97 2 5 -0.2 3 0.3 26
85.203	261.8	0.89 2 5 -0.1 3 0.3 26
85.233	263.5	1.02 2 5 -0.2 3 0.3 26
81.544	259.7	1.04 4n 0.3 26-Inch
85.189	263.4	0.96 4n 0.3 26-Inch
Arend, 1953: +2.8, -0.04; +0.3, -0.11.		
7321	A 127	09 21.4 +19 43
77.278	30.2	1.35 1 5 0.0 3 0.6 26
78.064	31.2	1.45 2 6 0.0 3 0.4 26
79.181	31.0	1.44 2 6 -0.2 3 0.8 26
78.174	30.8	1.41 3n 0.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

				B 775				09 22.0 -20 43								B 1122				09 26.4 -42 15			
80.227	298.6	2.97	2 4	+0.2	3	4.0	60					83.167	200.7	0.18	2 5	+0.6	2		60				
80.232	294.4	2.90	2 6	+0.2	3	4.0	60					83.176	202.8	0.18	2 7	+0.6	2	0.3	60				
80.230	296.5	2.94	2n	4.0		60-Inch						83.172	201.8	0.18	2n	0.3		60-Inch					
7334				A 1342				09 22.9 -09 51				7379				JC 5				09 26.8 -28 47			
80.240	16.8	0.16	2 8	+0.5	3	0.0	36					83.148	274.3	0.54	2 7	+0.8	3	0.7	36				
80.243	13.6	0.14	2 8	+0.4	3		36					83.151	274.8	0.56	2 7	+0.9	3	0.6	36				
80.249	4.6	0.16	2 9	+0.1	3		36					83.150	274.6	0.55	2n	0.6		36-Inch					
80.244	11.7	0.15	3n	0.0		36-Inch						7364				STF 1345				09 27.0 +64 20			
Finsen, 1976: -1.9, +0.02.												72.276	86.7	2.74	2 6	0.0	3	1.6	26				
7336				AG 165				09 23.3 +22 10				76.262	86.4	2.93	2 5	-0.2	4	2.4	26				
73.240	15.0	1.28	2 6	0.0	3	0.0	26					77.108	86.7	2.72	2 5	0.0	3	1.6	26				
77.108	14.4	1.24	2 5	-0.1	3	0.0	26					77.185	87.3	2.97	2 4	-0.3	3	2.4	26				
77.149	17.8	1.32	1 5	0.0	3	0.2	26					75.708	86.8	2.84	4n	2.0		26-Inch					
75.832	15.7	1.28	3n	0.1		26-Inch						7362				A 1588				09 27.3 -09 13			
7352				STF 1348				09 24.5 +06 21				80.240	192.9	0.31	2 8	+0.5	3	0.0	36				
77.188	316.9	1.98	2 5	-0.1	4	0.2	26					80.243	193.5	0.30	2 8	+0.5	3	0.2	36				
77.193	316.9	1.96	2 6	0.0	3	0.2	26					80.249	194.0	0.32	2 9	+0.1	3	0.0	36				
77.207	317.7	2.07	2 4	0.0	3	0.1	26					80.244	193.5	0.31	3n	0.1		36-Inch					
77.278	318.6	2.08	2 5	0.0	3	0.2	26					7384				HO 366				09 27.9 +31 28			
77.216	317.5	2.02	4n	0.2		26-Inch						77.188	58.2	0.26	3 5	0.0	3	0.0	26				
7359				HU 869				09 25.1 +14 49				77.278	53.5	0.22	2 6	+0.1	3	0.4	26				
77.188	283.5	0.52	2 5	0.0	3	0.3	26					77.281	56.6	0.25	1 7	0.0	3	0.3	26				
77.193	283.5	0.57	2 7	0.0	3	0.3	26					77.249	56.1	0.24	3n	0.2		26-Inch					
77.207	279.2	0.47	4 4	0.0	3	0.2	26					7390				STF 1356				09 28.5 +09 04			
77.278	280.4	0.57	2 6	0.0	3	0.2	26					77.108	6.6	0.43	1 5	0.0	3	0.6	26				
77.216	281.6	0.53	4n	0.2		26-Inch						77.133	6.3	0.41	1 6	+0.3	3	0.7	26				
7360				A 1343				09 26.1 +53 44				77.149	5.5	0.38	1 5	-0.2	3	0.5	26				
78.064	13.0	0.29	2 6	0.0	3	0.5	26					77.169	5.4	0.51	1 5	0.0	3	0.8	26				
79.181	18.1	0.29	2 6	0.0	3	0.5	26					79.219	11.0	0.41	1 6	0.0	3	0.8	26				
79.219	14.5	0.27	1 6	0.0	3	0.6	26					80.095	16.8	0.44	2 6	-0.2	3	0.7	26				
78.821	15.2	0.28	3n	0.5		26-Inch						80.295	17.0	0.41	2 7	-0.1	3	0.8	26				
7367				HU 56				09 26.3 -13 30				85.140	32.7	0.36	4 7	0.0	4	0.8	26				
80.251	156.7	1.86	2 6	+0.5	3	1.8	36					85.179	35.4	0.39	2 5	-0.2	3	0.8	26				
80.254	154.0	1.97	2 7	+0.5	3	1.2	36					85.203	35.1	0.43	2 5	-0.1	3	0.6	26				
80.257	157.4	1.72	2 5	+0.3	3	1.8	36					85.233	35.6	0.50	2 5	-0.1	3	1.0	26				
80.254	156.0	1.85	3n	1.6		36-Inch						77.140	6.0	0.43	4n	0.6		26-Inch					
												79.870	14.9	0.42	3n	0.8		26-Inch					
												85.189	34.7	0.42	4n	0.8		26-Inch					
												van Dessel, 1976: +1.5, -0.06; +1.0, -0.05; +0.4, -0.03.											

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

89

	COU 936		09 29.0 +19 18		7431		A 131		09 33.8 -10 20
87.213	233.6	0.72	2 6 0.0 3 0.9 26		80.246	319.6	1.13	2 5 +0.4 3 0.0 36	
87.232	234.0	0.73	2 6 -0.1 3 1.0 26		80.249	322.2	1.08	2 9 +0.3 3 0.0 36	
87.273	234.2	0.66	2 7 0.0 3 1.4 26		80.251	320.6	1.00	2 7 +0.5 3 0.0 36	
87.239	233.9	0.70	3n 1.1 26-Inch		80.249	320.8	1.07	3n 0.0 36-Inch	
	RST 3640		09 29.4 -12 29		7439		A 1986		09 34.9 -01 23
80.243	69.2	0.30	2 8 +0.5 3 0.0 36		80.243	179.5	0.20	1 8 +0.5 3 0.0 36	
80.246	74.1	0.32	2 5 +0.3 3 0.0 36		80.249	170.4	0.21	2 9 +0.4 3 0.0 36	
80.249	63.8	0.32	2 9 +0.2 3 0.0 36		80.251	182.9	0.19	1 6 +0.6 3 36	
80.246	69.0	0.31	3n 0.0 36-Inch		80.248	177.6	0.20	3n 0.0 36-Inch	
7400	BU 591		09 29.7 -03 07		7432		STF 1363		09 35.3 +60 53
80.246	35.3	0.73	2 4 +0.4 3 0.7 36		77.207	354.9	10.96	1 4 0.0 3 4.0 26	
80.249	34.7	0.96	2 9 +0.3 3 0.8 36		77.281	355.3	10.91	1 7 0.0 3 3.0 26	
80.251	35.1	0.81	2 6 +0.5 3 1.4 36		78.064	355.4	11.09	1 5 0.0 3 3.5 26	
80.249	35.0	0.83	3n 1.0 36-Inch		77.517	355.2	10.99	3n 3.5 26-Inch	
7404	A 130		09 30.5 +20 26				FIN 383		09 36.6 -24 42
77.108	101.9	0.82	2 5 0.0 3 0.0 26		80.232	167.2	0.14	2 6 +0.1 3 0.0 60	
77.193	105.3	0.87	2 5 0.0 3 0.0 26		80.240	149.1	0.16	2 8 +0.5 3 0.0 36	
77.278	106.3	0.81	2 5 +0.1 3 0.0 26		80.243	148.6	0.16	2 8 +0.6 3 0.0 36	
77.281	106.0	0.77	2 7 +0.1 3 0.0 26		80.249	164.6	0.15	2 7 +0.5 3 0.0 36	
77.215	104.9	0.82	4n 0.0 26-Inch		80.232	167.2	0.14	1n 0.0 60-Inch	
					80.244	154.1	0.16	3n 0.0 36-Inch	
	COP 1		09 30 7 -40 28		Either a half or a whole revolution has occurred.				
83.148	125.1	1.12	2 7 +0.9 3 0.8 36						
83.162	128.8	1.11	2 5 +0.5 3 0.5 36						
83.155	127.0	1.12	2n 0.6 36-Inch		7456		STF 1372		09 37.1 +16 14
van den Bos, 1945: +3.8, -0.03.					79.219	73.6	0.22	2 6 0.0 3 26	
	KUI 41		09 31.3 -13 29		79.334	80.5	0.25	2 4 +0.4 3 26	
83.143	153.9	0.29	2 7 +0.8 3 0.0 36		80.095	73.5	0.23	2 5 -0.3 3 26	
83.145	145.3	0.25	2 7 +1.0 3 36		80.255	78.8	0.22	2 6 0.0 3 26	
83.159	150.0	0.31	2 7 +0.4 3 0.2 36		85.140	97.5	0.21	2 6 0.0 4 26	
83.149	149.7	0.28	3n 0.2 36-Inch		85.203	94.6	0.20	2 5 -0.1 3 26	
Meintz, 1979: +1.4, -0.03.					85.318	94.3	0.15	2 5 -0.1 3 26	
					79.736	76.6	0.23	4n 26-Inch	
					85.220	95.5	0.19	3n 26-Inch	
					Now moving rapidly.				
7424	OL 40		09 32.2 -25 39				SEE 115		09 37.3 -53 40
83.143	10.4	1.44	2 7 +0.7 3 1.0 36		83.148	8.3	0.64	2 8 +0.9 3 0.3 36	
83.145	10.1	1.36	2 7 +1.1 3 0.8 36		83.151	7.4	0.62	2 8 +0.8 3 0.4 36	
83.144	10.2	1.40	2n 0.9 36-Inch		83.150	7.8	0.63	2n 0.4 36-Inch	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

7460	A 2479	09 37.7 +15 27	7509	I 496	09 45.4 -20 21
76.309	134.3 0.13	2 5 0.0 3 26	80.251	348.8 2.78	2 5 +0.7 3 1.5 36
76.309	134.3 0.13	1n 26-Inch	80.254	348.8 2.74	2 8 +0.4 3 1.4 36
	Heintz, 1978: +5.2, -0.03.		80.257	346.8 2.73	2 5 +0.2 3 1.0 36
			80.254	348.1 2.75	3n 1.3 36-Inch
7470	I 835	09 38.3 -20 32		I 172	09 47.5 -37 44
80.251	180.0 0.46	2 6 +0.7 3 0.4 36	83.167	339.6 0.99	2 5 +0.5 2 1.8 60
80.254	181.1 0.45	2 8 +0.4 3 0.4 36	83.176	339.1 1.12	2 6 +0.9 2 2.4 60
80.257	178.5 0.52	2 5 +0.2 3 0.4 36			
80.254	179.9 0.48	3n 0.4 36-Inch	83.172	339.4 1.06	2n 2.1 60-Inch
	RST 4917	09 39.8 -50 08	7514	HU 630	09 47.7 +50 57
83.148	45.4 0.49	2 6 +1.0 3 1.2 36	77.207	73.8 2.35	4 4 -0.1 3 0.2 26
83.151	37.0 0.58	2 7 +0.8 3 1.2 36	77.278	73.5 1.88	2 5 0.0 3 0.1 26
83.159	37.2 0.46	1 7 +1.1 3 1.0 36	77.281	74.9 2.17	2 7 0.0 3 0.2 26
83.153	39.9 0.51	3n 1.1 36-Inch	78.064	75.3 2.08	2 6 -0.1 3 0.0 26
			77.458	74.4 2.12	4n 0.1 26-Inch
	I 321 BC	09 39.9 -59 17		FIN 147	09 48.0 -61 01
80.224	210.9 2.20	2 8 +0.7 3 0.0 60	83.151	211.7 0.29	2 6 +0.9 3 0.8 36
80.230	210.3 2.29	2 5 +0.5 3 0.0 60	83.159	219.5 0.29	2 6 +1.0 3 1.2 36
80.227	210.6 2.24	2n 0.0 60-Inch	83.155	215.6 0.29	2n 1.0 36-Inch
	B 780	09 40.7 -57 59	This is only the second measure. Nearly a quadrant of retrograde motion has been described.		
80.224	254.0 0.12	2 8 +0.6 3 0.0 60			
80.230	243.6 0.15	2 5 +0.6 3 60			
80.232	245.4 0.17	2 6 +0.2 3 0.0 60		B 1661	09 48.2 -46 33
80.229	247.7 0.15	0.0 60-Inch	80.224	45.0 0.20	1 8 +0.7 3 60
	van den Bos, 1959: +0.6, -0.02.		80.232	47.8 0.15	2 5 +0.2 3 60
			80.228	46.4 0.18	2n 60-Inch
			Direct motion.		
7484	HU 229	09 42.7 +60 16		COO 90	09 48.7 -44 54
77.281	182.2 0.92	1 7 0.0 3 0.3 26	80.246	115.2 2.28	2 5 +0.5 3 0.5 36
85.203	182.5 0.82	2 5 -0.2 3 0.4 26	80.251	115.0 2.37	2 5 +0.7 3 0.4 36
86.252	183.2 1.09	2 7 -0.1 3 0.6 26	80.257	115.5 2.29	2 5 +0.4 3 0.4 36
82.912	182.6 0.91	3n 0.4 26-Inch	80.251	115.2 2.31	3n 0.4 36-Inch
	FIN 326	09 44.2 -27 47		KUI 44	09 49.8 +21 11
80.240	329.0 0.15	2 8 +0.5 3 36	79.334	210.2 0.24	2 5 0.0 3 0.3 26
80.243	348.5 0.15	2 8 +0.6 3 36	80.095	209.7 0.25	2 5 -0.4 3 0.3 26
80.249	352.1 0.15	2 9 +0.5 3 0.0 36	80.295	208.7 0.22	2 7 -0.2 3 0.3 26
80.244	343.2 0.15	3n 0.0 36-Inch	85.318	204.4 0.24	2 6 -0.4 3 0.4 26
	Heintz, 1982: -4.2, +0.02.		85.329	207.5 0.16	2 7 -0.2 3 0.7 26
			85.351	205.0 0.21	2 5 +0.4 3 0.4 26
			79.908	209.5 0.24	3n 0.3 26-Inch
			85.333	206.6 0.20	3n 0.5 26-Inch

91

7535	A 2560		09 50.1 +01 48				7545	STT 208		09 52.1 +54 04			
77.108	13.1	0.99	4 4	-0.2 3	0.6 26	77.108	85.6	0.26	2 4	0.0 3	0.5 26		
77.149	12.1	1.19	1 5	+0.3 3	0.6 26	77.133	87.5	0.25	2 7	+0.1 3	0.5 26		
77.169	12.5	1.09	1 5	-0.2 3	1.0 26	77.149	87.8	0.26	2 5	-0.3 3	0.4 26		
						77.169	88.2	0.26	3 6	-0.3 3	0.3 26		
77.142	12.6	1.09	3n	0.7	26-Inch	78.064	92.4	0.26	2 6	-0.1 3	0.4 26		
						78.223	92.1	0.23	2 4	+0.2 3	0.4 26		
						79.181	95.2	0.20	2 5	-0.4 3	26		
						79.184	97.0	0.23	2 7	0.0 3	0.3 26		
7538	J 83		09 50.5 +03 37				80.095	102.8	0.25	2 5	-0.5 3	0.5 26	
77.193	239.0	2.17	2 6	-0.2 3	0.3 26	80.295	104.7	0.21	2 7	-0.1 3	0.4 26		
77.281	239.8	2.20	2 6	+0.1 3	0.5 26	81.232	113.0	0.24	2 5	-0.1 3	26		
78.064	240.3	2.08	2 5	0.0 3	0.2 26	82.313	121.1	0.25	2 7	0.0 3	26		
						82.324	121.3	0.25	2 3	0.0 3	26		
						82.327	120.7	0.25	2 3	-0.2 3	26		
77.513	239.7	2.15	3n	0.3	26-Inch	82.340	119.7	0.22	2 8	-0.1 4	0.6 26		
						85.140	139.7	0.24	2 7	-0.2 4	26		
						85.179	143.1	0.18	2 5	-0.1 3	26		
						85.203	135.1	0.23	2 5	-0.3 3	26		
7533	KR 33		09 50.9 +58 12				85.318	145.6	0.19	2 6	-0.6 3	0.5 26	
77.207	213.5	2.19	1 4	0.0 3	0.0 26	86.252	153.2	0.18	2 8	-0.1 3	26		
77.278	215.0	2.17	2 5	0.0 3	0.0 26	87.174	157.4	0.17	2 7	-0.4 3	26		
77.281	215.8	2.01	2 7	0.0 3	0.0 26	87.194	154.6	0.20	2 7	-0.7 3	26		
						87.232	158.8	0.20	4 6	-0.4 3	26		
						87.273	161.7	0.18	2 7	-0.2 3	26		
77.255	214.8	2.12	3n	0.0	26-Inch	77.140	87.3	0.26	4n	0.4	26-Inch		
						78.663	94.2	0.23	4n	0.4	26-Inch		
						80.541	106.8	0.23	3n	0.4	26-Inch		
						82.326	120.7	0.24	4n	0.6	26-Inch		
7541	HO 369		09 51.2 +36 29				85.210	140.9	0.21	4n	0.5	26-Inch	
80.095	101.9	0.35	2 5	-0.4 3	0.0 26	87.025	157.1	0.19	5n		26-Inch		
80.295	99.5	0.35	2 7	0.0 3	0.3 26	Heintz, 1971:	+2.8, 0.00;	+1.7, -0.02;					
81.232	100.3	0.35	2 5	-0.2 3	0.2 26		+3.2, 0.00;	+5.2, +0.02;					
86.252	99.7	0.41	2 8	0.0 3	0.2 26		+2.3, +0.02;	+1.2, 0.00.					
87.174	102.2	0.43	2 7	-0.3 3	0.2 26								
87.194	99.2	0.41	2 6	-0.7 3	26								
80.541	100.6	0.35	3n	0.2	26-Inch	7547	A 344		09 52.1 +29 16				
86.873	100.4	0.42	3n	0.2	26-Inch	82.313	58.7	0.72	2 7	0.0 3	0.4 26		
						82.327	54.6	0.55	2 6	-0.1 3	0.4 26		
Baize, 1981:	+0.7, +0.01;	-0.6, +0.08.				82.340	64.1	0.56	2 7	+0.3 4	0.4 26		
						82.327	59.1	0.61	3n	0.4	26-Inch		
7536	STF 1381		09 51.3 +60 37				7550	A 2561		09 52.1 +02 49			
77.188	196.4	0.99	1 5	-0.3 3	0.3 26	79.219	313.5	0.76	2 5	-0.1 3	0.5 26		
77.193	196.8	0.95	1 6	0.0 3	0.2 26	80.295	311.5	0.89	2 7	0.0 3	0.6 26		
77.207	194.4	0.91	2 4	+0.1 3	0.0 26	82.286	307.7	1.01	2 5	+0.3 3	0.7 26		
77.278	195.4	0.98	1 5	+0.1 3	0.2 26	82.313	309.5	0.91	2 7	+0.1 3	0.5 26		
77.216	195.8	0.98	4n	0.2	26-Inch	81.028	310.6	0.89	4n	0.6	26-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

FIN 149				09 53.8 -65 00				FIN 152				09 57.9 -60 45			
80.224	177.0	1.12	2 8	+0.7 3	1.8 60			83.176	271.4	0.34	2 4	+0.9 2	1.0 60		
80.232	174.8	1.10	1 5	+0.1 3	2.8 60			83.176	271.4	0.34	1n	1.0	60-Inch		
80.228	175.9	1.11	2n	2.3	60-Inch										
STF 1386				09 55.0 +68 54				COU 2086				09 58.2 +38 56			
77.188	112.4	2.09	2 5	-0.2 3	0.0 26			85.140	63.0	0.15	2 8	0.0 4	26		
77.193	112.5	2.14	2 6	0.0 3	0.1 26			85.329	63.4	0.12	2 7	-0.1 3	26		
77.207	113.8	2.11	2 4	+0.1 3	0.0 26			86.252	59.2	0.13	2 7	0.0 3	26		
77.278	112.8	2.09	2 5	0.0 3	0.0 26			85.574	61.9	0.13	3n		26-Inch		
77.216	112.9	2.11	4n	0.0	26-Inch										
RST 448				09 55.5 -57 56				A 2482				10 00.0 +16 10			
80.246	316.4	2.57	2 4	+0.6 3	0.1 36			78.064	24.8	0.70	4 5	0.0 3	1.2 26		
80.254	317.6	2.59	2 6	+0.3 3	0.2 36			79.184	32.1	0.82	4 6	0.0 3	1.4 26		
80.257	318.0	2.55	2 5	+0.5 3	0.1 36			79.219	31.0	0.73	1 6	-0.1 3	1.0 26		
80.252	317.3	2.57	3n	0.1	36-Inch			78.822	29.3	0.75	3n	1.2	26-Inch		
FIN 151				09 56.9 -63 24				RST 3673				10 00.4 -07 31			
83.143	350.4	0.92	2 7	+1.0 3	1.0 36			83.156	153.3	0.22	2 7	+0.3 3	0.0 36		
83.151	346.8	0.89	2 8	+0.8 3	1.6 36			83.159	147.3	0.25	2 7	+1.1 3	0.2 36		
83.147	346.8	0.90	2n	1.3	36-Inch			83.158	150.3	0.24	2n	0.1	36-Inch		
POP 151				09 56.6 +43 59				FIN 154				10 01.3 -58 59			
85.140	85.1	0.40	2 7	-0.1 4	0.2 26			80.224	203.0	1.99	1 8	+0.8 3	2.0 60		
85.179	86.6	0.49	2 4	0.0 3	26			80.232	202.5	2.08	1 4	+0.3 3	3.3 60		
85.203	81.8	0.47	2 5	-0.3 2	0.0 26			80.228	202.8	2.04	2n	2.6	60-Inch		
85.174	84.5	0.45	3n	0.1	26-Inch										
A 1766				09 57.1 -01 21				RST 460				10 01.4 -58 06			
82.313	177.4	0.51	1 7	+0.1 3	0.3 26			80.257	343.2	0.46	2 5	+0.5 3	0.4 36		
82.327	177.0	0.52	1 6	-0.1 3	0.2 26			80.257	343.2	0.46	1n	0.4	36-Inch		
82.340	171.0	0.59	2 7	+0.3 3	0.3 26										
83.156	175.5	0.45	2 6	0.0 3	0.0 36			STF 1398				10 01.6 +68 43			
83.159	175.5	0.46	1 8	+1.0 3	0.4 36			76.309	118.2	2.59	2 5	0.0 3	3.0 26		
82.327	175.1	0.54	3n	0.3	26-Inch			77.149	118.7	2.68	2 5	-0.2 3	3.0 26		
83.158	175.5	0.46	2n	0.2	36-Inch			77.169	118.2	2.76	2 6	-0.3 3	2.8 26		
								76.876	118.4	2.68	3n	2.9	26-Inch		
A 63				09 57.4 -03 55				STT 210				10 02.6 +46 22			
82.327	7.8	1.42	1 6	0.0 3	1.8 26			77.149	259.2	1.19	2 5	-0.1 3	0.7 26		
85.318	11.2	1.58	1 5	-0.2 3	2.2 26			77.169	261.6	1.18	2 6	-0.2 3	0.6 26		
85.329	8.4	1.45	1 7	0.0 3	2.5 26			77.185	262.1	1.24	2 4	-0.7 3	0.8 26		
84.325	9.1	1.48	3n	2.2	26-Inch			77.188	260.9	1.26	2 5	-0.3 3	0.8 26		
No measures for 53 years. Direct motion.								77.173	261.0	1.22	4n	0.7	26-Inch		

93

7619	A 64		10 02.8 -05 56		I 173		10 06.2 -47 22
80.257	345.8	1.38	1 5 0.0 3 3.2 36		83.148	355.8	0.89 2 6 +0.7 3 1.2 36
80.257	345.8	1.38	1n 3.2 36-Inch		83.151	355.9	0.91 2 8 +0.9 3 1.2 36
	DAW 99		10 03.1 -30 16		83.150	355.8	0.90 2n 1.2 36-Inch
					Jones, 1960:	+0.6, +0.10.	
83.145	236.5	0.20	2 7 +0.9 3 36				
83.151	244.9	0.29	2 7 +1.1 3 0.2 36				
83.156	230.6	0.21	2 7 +0.5 3 36				
83.151	237.3	0.23	3n 0.2 36-Inch		7644	BU 217	10 06.8 -24 43
					83.162	126.1	2.04 2 6 +0.3 3 0.1 36
7629	I 292		10 04.3 -28 23		83.162	126.1	2.04 1n 0.1 36-Inch
83.145	346.5	0.32	2 7 +0.9 3 0.2 36				
83.151	345.0	0.33	2 8 +1.2 3 0.2 36		7643	HDO 125	10 06.9 -01 43
83.156	346.0	0.29	2 7 +0.6 3 0.3 36		77.193	185.7	2.69 1 7 0.0 3 0.0 26
83.151	345.8	0.31	3n 0.2 36-Inch		77.278	185.1	2.66 1 6 0.0 3 0.1 26
Heintz,	1981:	+4.1, -0.02.			77.281	185.4	2.47 1 6 0.0 3 0.0 26
Starikova,	1986:	+1.4, -0.05.			83.162	187.5	2.65 1 6 +0.2 3 0.1 36
					77.251	185.4	2.61 3n 0.0 26-Inch
					83.162	187.5	2.65 1n 0.1 36-Inch
	RST 5343		10 04.3 -34 11				
83.167	223.2	1.19	2 5 +0.3 2 0.0 60				
83.173	223.8	1.17	2 5 +0.6 2 0.3 60			FIN 157	10 06.9 -57 00
83.170	223.5	1.18	2n 0.2 60-Inch		80.224	231.4	0.85 1 7 +0.9 3 0.8 60
	FIN 155		10 04.8 -63 13		83.143	230.6	0.73 1 5 +1.4 3 1.0 36
80.246	75.2	1.55	2 4 +0.6 3 0.8 36		83.151	237.5	0.53 2 7 +0.8 3 1.2 36
80.254	76.8	1.71	2 6 +0.3 3 1.6 36		80.224	231.4	0.85 1n 0.8 60-Inch
80.257	73.8	1.61	2 4 +0.5 3 0.8 36		83.147	234.0	0.63 2n 1.1 36-Inch
80.252	75.3	1.62	3n 1.1 36-Inch		7657	A 1988	10 09.0 +25 32
7635	I 293		10 05.2 -28 12		85.140	207.5	0.39 2 7 -0.1 4 0.1 26
80.240	320.5	0.21	2 8 +0.3 3 0.5 36		85.203	209.2	0.41 2 5 -0.4 3 0.0 26
80.243	329.8	0.20	1 7 +0.4 3 36		85.318	212.7	0.45 2 5 -0.2 3 26
80.242	325.2	0.20	2n 0.2 36-Inch		85.220	209.8	0.42 3n 0.0 26-Inch
7631	A 2142		10 05.7 +41 03				
77.149	300.3	1.05	2 4 -0.1 3 0.8 26		7662	A 2145	10 09.3 +20 20
77.169	297.4	0.97	2 6 -0.1 3 0.8 26		76.257	193.2	0.21 3 6 -0.2 4 0.0 26
77.185	297.7	0.98	2 3 -0.7 3 1.0 26		76.262	200.8	0.16 3 7 0.0 4 0.0 26
77.188	299.7	1.07	2 4 -0.1 3 0.8 26		76.260	197.0	0.18 2n 0.0 26-Inch
77.173	298.8	1.02	4n 0.9 26-Inch		Finsen,	1977:	+3.6, +0.03.
					Tokovinen,	1987:	+2.8, +0.01.
7632	STF 1406		10 05.7 +31 05				
77.169	223.7	0.92	1 6 0.0 3 0.8 26		7667	A 2980	10 10.0 -06 37
77.193	223.6	0.78	3 6 -0.3 3 0.8 26		82.327	187.1	0.60 2 5 -0.1 3 0.1 26
77.207	218.7	0.85	1 4 +0.1 3 0.7 26		85.329	186.5	0.55 2 7 -0.1 3 0.0 26
77.278	225.0	0.87	2 6 0.0 3 0.8 26		86.252	185.4	0.65 1 6 -0.1 3 0.3 26
77.212	223.3	0.86	4n 0.8 26-Inch		84.636	186.3	0.60 3n 0.1 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

95

7711	HLD 101	10 16.8 -20 40	7730	STF 1426	10 20.5 +06 26
80.240	115.0 1.59	2 8 +0.4 3 3.2 36	77.188	302.9 0.89	2 4 0.0 3 0.5 26
80.243	114.6 1.43	2 9 +0.5 3 3.5 36	77.193	303.8 0.89	2 7 -0.1 3 0.5 26
80.249	118.0 1.62	2 9 0.0 3 3.0 36	77.207	304.4 0.79	2 4 -0.1 3 0.5 26
80.244	115.9 1.55	3n 3.2 36-Inch	77.278	304.4 0.87	2 5 0 0 3 26
	HU 1598	10 18.2 -50 49	87.273	305.1 1.02	2 7 -0.2 3 0.3 26
83.148	234.0 0.30	2 8 +0.8 3 0.7 36	87.342	306.1 1.00	2 7 -0.3 3 0.5 26
83.151	238.4 0.32	2 7 +1.1 3 0.4 36	87.350	306.7 0.92	2 5 0.0 3 0.5 26
83.159	236.4 0.30	2 6 +1.1 3 0.5 36	87.358	308.2 0.91	2 5 +0.2 3 0.4 26
83.153	236.3 0.31	3n 0.5 36-Inch	77.216	303.9 0.86	4n 0.5 26-Inch
	RS 4454	10 18.3 -03 26	87.331	306.5 0.96	4n 0.4 26-Inch
80.243	221.0 0.22	2 8 +0.5 3 0.0 36	7738	BU 25	10 21.8 -09 46
80.249	220.9 0.20	2 9 +0.1 3 0. 36	77.193	147.8 1.73	1 7 0.0 3 0.0 26
80.251	217.0 0.22	2 8 +0.5 3 0.0 36	77.278	148.6 1.72	2 4 +0.1 3 0.5 26
80.248	219.6 0.21	3n 0.0 36-Inch	77.281	147.7 1.62	1 6 0.0 3 0.8 26
			83.154	145.3 1.74	2 5 +0.9 3 0.5 36
7722	I 206	10 19.1 -23 10	77.251	148.0 1.69	3n 0.6 26-Inch
83.162	316.7 0.50	2 6 +0.4 3 0.3 36	83.154	145.3 1.74	1n 0.5 36-Inch
83.162	316.7 0.50	1n 0.3 36-Inch			
Slow decrease in angle and separation.			7744	STT 216	10 22.8 +15 21
	HJ 4306	10 19.1 -64 40	80.295	260.1 1.60	2 7 0.0 3 2.4 26
83.173	132.7 2.53	2 6 +0.6 2 0.1 60	81.341	259.6 1.57	2 7 -0.2 3 2.4 26
83.176	132.4 2.52	2 6 +0.6 2 0.1 60	81.349	260.0 1.58	2 5 0.0 3 1.6 26
33.174	132.6 2.52	2n 0.1 60-Inch	85.140	253.5 1.47	2 8 -0.2 4 2.0 26
			85.203	254.3 1.67	2 5 -0.2 3 2.5 26
			85.318	255.3 1.64	2 5 -0.3 3 2.8 26
7721	STF 1423	10 19.2 +20 34	80.995	259.9 1.58	3n 2.1 26-Inch
82.346	8.2 0.90	2 5 0.0 3 0.7 26	85.220	255.0 1.59	3n 2.4 26-Inch
85.203	5.6 0.74	2 5 -0.3 3 0.4 26	Heintz, 1978: +5.2, +0.12; +4.9, +0.03.		
85.318	4.8 0.88	2 5 -0.3 3 26			
84.289	6.2 0.84	3n 0.6 26-Inch	7758	STF 1429	10 25.1 +24 38
Heintz, 1960: -0.6, -0.20.			81.341	183.5 0.63	2 7 -0.1 3 0.2 26
	RST 3688	10 19.3 -12 31	81.349	184.1 0.63	2 5 0.0 3 0.1 26
80.249	321.8 0.61	2 9 +0.2 3 2.0 36	81.286	181.9 0.63	2 5 -0.2 3 0.0 26
80.249	321.8 0.61	1n 2.0 36-Inch	82.313	184.1 0.60	2 8 0.0 3 0.0 26
	FIN 162	10 19.6 -57 24	85.140	180.6 0.53	2 8 -0.1 4 0.3 26
83.173	177.8 0.29	2 6 +0.7 2 0.6 60	85.203	177.3 0.54	2 5 -0.2 3 0.2 26
83.176	174.2 0.36	2 6 +0.7 2 0.2 60	85.318	182.3 0.60	2 5 -0.2 3 26
83.184	176.4 0.25	2 7 +0.5 2 0.5 60	81.822	183.4 0.62	4n 0.1 26-Inch
83.177	176.1 0.30	3n 0.4 60-Inch	85.220	180.1 0.56	3n 0.2 26-Inch
			Zulevic, 1981: -0.6, +0.02; -0.6, -0.05.		
7760	A 2568	10 25.2 +01 00			
77.281	353.3 0.35	1 6 0.0 3 0.3 26			
80.295	356.5 0.31	1 6 0.0 3 0.2 26			
81.341	351.7 0.40	1 5 0.0 3 0.2 26			
79.639	353.8 0.35	3n 0.2 26-Inch			

7769	A 2570		10 26.0 +02 56	7785	A 1993		10 28.8 +45 57
82.313	128.6	0.33	2 7 0.0 3 0.0 26	79.219	122.8	0.26	2 6 -0.3 3 0.8 26
82.327	127.1	0.30	2 5 -0.1 3 0.0 26	81.341	123.6	0.37	2 7 0.0 3 0.7 26
82.340	124.8	0.33	2 7 0.0 4 0.0 26	81.349	120.4	0.34	2 5 +0.1 3 0.8 26
82.346	128.4	0.36	2 5 0.0 3 0.2 26	80.636	122.3	0.32	3n 0.8 26-Inch
87.273	305.9	0.28	2 7 -0.2 3 0.0 26	7792	STT 220		10 29.2 +10 09
87.342	306.2	0.36	2 7 -0.2 3 0.2 26	77.169	83.4	0.81	2 6 -0.1 3 1.4 26
87.350	305.5	0.35	2 5 0.0 3 0.0 26	77.193	85.8	0.76	2 7 0.0 3 1.6 26
87.358	300.3	0.28	2 5 0.0 3 0.0 26	77.281	82.6	0.77	2 7 +0.2 3 1.6 26
82.332	127.2	0.33	4n 0.0 26-Inch	77.214	83.9	0.78	3n 1.5 26-Inch
87.331	304.5	0.32	4n 0.0 26-Inch				
Quadrant uncertain.							
7775	STT 217		10 26.9 +17 13	7800	STF 1440		10 29.9 -03 55
78.064	144.3	0.35	1 6 0.0 3 0.4 26	87.273	345.3	15.24	1 8 0.0 3 1.0 26
78.943	135.9	0.33	2 4 -0.1 3 0.3 26	87.342	344.8	15.28	1 7 -0.1 3 2.0 26
79.184	138.4	0.31	2 7 -0.2 3 0.3 26	87.308	345.0	15.26	2n 1.5 26-Inch
79.219	140.0	0.30	2 6 -0.4 3 0.4 26	7802	STF 1439		10 30.1 +20 48
85.140	143.5	0.45	2 8 -0.1 4 0.4 26	86.350	86.3	1.39	2 6 -0.1 3 0.5 26
85.329	144.5	0.46	2 7 -0.1 3 0.5 26	87.273	84.6	1.43	2 8 -0.1 3 0.4 26
85.351	142.2	0.49	2 4 -0.1 3 0.5 26	87.342	85.2	1.36	2 7 -0.2 3 0.4 26
85.354	144.0	0.45	2 7 0.0 3 0.3 26	87.350	86.3	1.41	2 5 0.0 3 0.4 26
78.852	139.6	0.32	4n 0.4 26-Inch	87.078	85.6	1.40	4n 0.4 26-Inch
85.294	143.6	0.46	4n 0.4 26-Inch				
Heintz, 1975: -2.0, -0.03; -0.4, -0.02.							
B 1678			10 26.9 -60 40	RST 3701			10 30.9 -36 16
80.227	236.7	0.27	2 5 +0.3 3 0.2 60	83.145	157.7	0.18	2 8 +0.8 3 0.0 36
80.232	238.0	0.19	2 6 +0.6 3 60	83.159	161.5	0.17	2 7 +1.1 3 36
80.230	237.4	0.23	2n 0.2 60-Inch	83.162	147.2	0.19	2 5 +0.5 3 36
7779	STT 218		10 27.5 +03 33	83.155	155.5	0.18	3n 0.0 36-Inch
77.149	115.6	0.47	2 4 -0.1 3 1.5 26	7811	A 1350		10 31.4 -02 27
77.169	116.2	0.45	1 6 -0.2 3 1.5 26	82.313	319.4	2.71	2 8 +0.1 3 0.5 26
77.193	112.6	0.43	2 6 0.0 3 1.5 26	82.327	319.5	2.72	2 5 -0.1 3 0.4 26
77.281	119.2	0.49	3 5 +0.1 3 1.6 26	82.340	320.3	2.75	2 7 0.0 4 0.3 26
77.198	115.9	0.46	4n 1.5 26-Inch	82.327	319.7	2.73	3n 0.4 26-Inch
FIN 164			10 27.8 -55 12	7814	KU 35		10 32.2 +47 23
80.227	8.4	1.09	1 5 +0.4 3 1.5 60	77.169	13.5	1.28	2 6 -0.1 3 0.5 26
80.232	6.4	1.24	1 6 +0.7 3 2.8 60	78.064	12.6	1.10	2 5 -0.1 3 0.6 26
80.230	7.4	1.16	2n 2.2 60-Inch	78.943	16.7	1.32	1 5 -0.1 3 0.5 26
7780	HU 879		10 27.9 +36 42	78.059	14.3	1.23	3n 0.5 26-Inch
79.181	230.1	0.51	2 6 -0.1 3 1.6 26	7819	A 1994		10 32.4 +46 31
79.219	231.8	0.49	2 6 -0.3 3 2.2 26	78.943	89.9	1.38	2 4 0.0 3 2.2 26
79.200	231.0	0.50	2n 1.9 26-Inch	79.219	87.6	1.57	2 6 -0.2 3 2.6 26
Heintz, 1981: +4.3, -0.0							

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

97

RST 496				10 32.7 -52 02	7844	A 2055				10 36.5 +44 30
83.173	144.0	0.54	2 7	+0.6 2 0.0 60	76.309	160.4	0.32	2 5	0.0 3 0.1 26	
83.176	143.2	0.59	2 5	+0.6 2 0.2 60	77.149	163.4	0.30	2 4	-0.1 3 0.0 26	
					77.169	158.2	0.31	2 6	-0.1 3 0.0 26	
83.174	143.6	0.56	2n	0.1 60-Inch	77.193	154.9	0.31	2 7	0.0 3 0.0 26	
Angular decrease.					76.955	159.2	0.31	4n	0.0 26-Inch	
FIN 26				10 32.9 -39 56	7852	I 857				10 36.6 -28 46
83.143	170.5	0.20	2 7	+1.0 3 36	83.162	270.1	0.29	2 5	+0.7 3 36	
83.145	168.3	0.28	2 7	+0.8 3 36	83.176	269.5	0.27	2 6	+1.0 2 0.5 60	
83.148	169.6	0.24	2 7	+0.7 3 0.4 36	83.184	269.2	0.23	2 7	+0.4 2 0.0 60	
83.145	169.5	0.24	3n	0.4 36-Inch	83.162	270.1	0.29	1n	36-Inch	
					83.180	269.4	0.25	2n	0.2 60-Inch	
FIN 27				10 33.2 -39 47	7860	STF 1454				10 38.1 +26 37
83.143	237.5	4.29	2 5	+1.1 3 4.0 36	78.943	339.0	1.92	2 4	0.0 3 2.6 26	
83.145	243.6	4.24	2 7	+0.9 3 3.8 36	79.184	337.7	1.90	2 6	-0.2 3 2.5 26	
					79.219	338.2	1.81	2 6	-0.1 3 2.0 26	
83.144	240.6	4.26	2n	3.9 36-Inch	79.115	338.3	1.88	3n	2.4 26-Inch	
The large change indicates that this pair may be optical.										
B 1164				10 34.4 -46 29	7868	J 79				10 38.9 +07 22
80.249	80.8	0.66	2 7	+0.5 3 1.0 36	82.327	135.5	1.64	2 8	-0.1 3 0.8 26	
83.145	79.5	0.76	2 6	+1.0 3 1.0 36	82.346	136.3	1.61	2 5	-0.1 3 2.0 26	
83.148	83.2	0.58	2 6	+0.8 3 0.8 36	85.203	135.0	1.64	2 5	-0.3 2 0.9 26	
83.173	85.7	0.63	2 6	+0.7 2 1.0 60						
					83.292	135.6	1.63	3n	1.2 26-Inch	
82.181	81.2	0.67	3n	0.9 36-Inch						
83.173	85.7	0.63	1n	1.0 60-Inch						
7840 A 2154				10 35.8 +31 47	7877	J 1351				10 39.1 +07 26
79.219	118.1	0.43	2 6	-0.1 3 0.2 26	75.249	119.1	5.03	2 6	-0.1 3 1.0 26	
80.295	113.8	0.59	2 7	0.0 3 0.3 26	85.203	113.2	5.11	2 5	-0.2 3 0.8 26	
81.341	112.0	0.67	2 7	0.0 3 0.2 26	85.329	117.0	5.15	2 6	-0.2 3 1.5 26	
80.285	114.6	0.56	3n	0.2 26-Inch	81.927	116.4	5.10	3n	1.1 26-Inch	
7842 A 2571 BC				10 35.8 +02 33	7866	A 66				10 39.1 -05 53
76.262	139.4	0.29	2 6	+0.1 4 0.1 26	79.219	136.2	0.67	2 4	0.0 3 0.3 26	
77.193	140.3	0.35	3 7	+0.1 3 0.4 26	80.295	134.8	0.71	2 6	+0.2 3 0.5 26	
77.281	145.0	0.32	1 6	+0.1 3 0.3 26	81.341	141.0	0.66	2 5	+0.1 3 0.5 26	
85.140	159.2	0.30	2 7	-0.1 4 0.5 26						
85.329	152.7	0.35	2 5	-0.2 3 0.3 26	80.285	137.3	0.68	3n	0.4 26-Inch	
86.252	152.2	0.36	2 6	-0.1 3 0.4 26						
76.912	141.6	0.32	3n	0.3 26-Inch						
85.574	154.7	0.34	3n	0.4 26-Inch						
7846 BU 411				10 36.1 -26 40	7871	STT 224				10 39.7 +08 51
80.240	319.0	1.31	2 8	+0.2 3 1.0 36	80.295	179.8	0.46	1 7	+0.1 3 0.8 26	
80.243	321.0	1.11	2 9	+0.3 3 0.8 36	81.341	177.6	0.54	2 5	+0.2 3 1.0 26	
80.246	321.0	1.05	2 5	+0.2 3 1.0 36	81.349	180.4	0.54	2 5	0.0 3 1.4 26	
83.154	317.3	1.24	2 5	+0.8 3 1.2 36	82.313	182.5	0.46	2 8	0.0 3 1.0 26	
83.162	323.1	1.20	2 6	+0.6 3 0.7 36	85.140	172.9	0.44	1 8	0.0 4 1.5 26	
					85.329	163.5	0.40	2 6	-0.1 3 2.0 26	
					85.354	169.8	0.47	2 7	-0.1 3 1.3 26	
80.243	320.3	1.15	3n	0.9 36-Inch	81.324	180.1	0.50	4n	1.0 26-Inch	
83.158	320.2	1.22	2n	1.0 36-Inch	85.274	168.7	0.44	3n	1.6 26-Inch	
Newburg, 1966: -1.8, +0.04; -0.5, +0.05.					Ekenberg, 1945: +10.3, -0.03; +3.5, -0.10.					
					Haintz, 1964: +3.6, -0.05; -3.6, -0.12.					

	FIN 40		10 40.6 -53 41		7911		A 2771		10 44.6 +05 30
83.151	237.4	0.25	2 7 +1.1 3 0.2 36		87.273	290.6	0.25	2 7 -0.1 3	26
83.159	234.8	0.23	2 7 +1.1 3 0.0 36		87.342	296.7	0.20	2 7 -0.2 3	26
					87.350	288.2	0.26	2 5 0.0 3	26
83.155	236.1	0.24	2n 0.1 36-Inch						
					87.322	291.8	0.24	3n	26-Inch
A quadrant has been described.									
7884	HDO 128		10 40.9 -13 05				B 794		10 44.6 -38 09
82.313	6.6	1.79	1 7 +0.1 3 0.7 26		83.167	177.5	0.18	2 5 +0.7 2 0.0 60	
82.327	6.3	1.84	1 5 0.0 3 0.7 26		83.173	177.2	0.24	2 7 +0.7 2 0.2 60	
82.340	5.2	1.86	1 7 -0.2 3 0.8 26		83.184	171.0	0.17	2 6 +0.4 2	60
83.154	10.7	1.83	2 5 +0.8 3 1.4 36						
83.159	10.6	1.85	2 8 +1.2 3 1.6 36		83.175	175.2	0.20	3n 0.1	60-Inch
82.327	6.0	1.83	3n 0.7 26-Inch						
83.156	10.6	1.84	2n 1.5 36-Inch						
							A 3082		10 46.3 -04 59
7888	STT 227		10 41.7 +10 45		83.154	70.6	1.41	2 5 +0.9 3 0.1 36	
					83.159	71.7	1.46	2 7 +1.3 3 0.2 36	
78.943	1.7	0.89	1 4 0.0 3 0.5 26						
79.184	357.9	0.80	1 7 -0.2 3 0.3 26		83.156	71.2	1.44	2n 0.2	36-Inch
79.219	0.0	0.81	1 7 +0.1 3 0.2 26						
85.140	359.2	0.80	1 8 +0.2 4 0.6 26						
85.203	358.8	0.80	2 5 -0.2 3 0.4 26		7922	STF 1470		10 46.3 -05 46	
85.318	0.7	0.75	2 5 -0.4 3 26						
					76.344	190.9	1.36	1 5 0.0 3 0.2 26	
79.115	359.9	0.83	3n 0.3 26-Inch		77.133	190.8	1.50	1 7 +0.1 3 0.3 26	
85.220	359.6	0.78	3n 0.5 26-Inch		77.169	189.5	1.42	1 5 -0.3 3 0.3 26	
					77.193	191.2	1.29	1 6 0.0 3 0.2 26	
	JSP 418		10 42.4 -36 12		83.154	192.4	1.43	2 5 +0.8 3 0.1 36	
					83.159	193.9	1.42	2 7 +1.2 3 0.0 36	
83.167	278.7	0.15	2 5 +0.6 2 0.0 60		76.960	190.6	1.39	4n 0.2	26-Inch
83.173	282.2	0.16	2 7 +0.7 2 0.0 60		83.156	193.2	1.42	2n 0.0	36-Inch
83.184	283.6	0.16	2 7 +0.4 2 60						
83.175	281.5	0.16	3n 0.0 60-Inch						
Rapid direct motion.					7926		STT 228		10 47.3 +22 34
					76.344	174.9	0.62	1 5 +0.1 3 0.6 26	
7896	A 2768		10 42.7 +03 35		77.133	177.8	0.63	1 6 +0.1 3 0.8 26	
					77.149	180.3	0.63	1 4 0.0 3 0.7 26	
85.140	316.7	0.21	2 8 0.0 4 1.2 26		77.169	176.6	0.56	1 5 0.0 3 0.6 26	
85.354	312.7	0.24	3 7 -0.1 3 1.2 26						
86.252	315.4	0.24	2 6 -0.1 3 1.2 26		76.949	177.4	0.61	4n 0.7	26-Inch
85.582	314.9	0.23	3n 1.2 26-Inch						
Baize, 1984: +3.5, -0.01.					7929		STT 229		10 48.1 +41 06
					86.350	280.0	0.78	2 6 -0.3 3 0.3 26	
	FIN 41		10 43.1 -54 14		87.273	278.6	0.69	2 7 0.0 3 0.2 26	
					87.342	277.7	0.68	2 6 -0.1 3 0.2 26	
83.143	61.8	0.69	2 5 +1.2 3 0.6 36		87.350	279.0	0.75	2 5 -0.2 3 0.2 26	
83.145	57.5	0.70	2 6 +1.0 3 0.7 36						
					87.079	278.8	0.72	4n 0.2	26-Inch
83.144	59.6	0.70	2n 0.6 36-Inch						
7900	A 2769		10 43.2 +04 40		7933		A 2572		10 48.8 +01 24
87.273	218.9	0.47	2 7 0.1 3 0.8 26		82.327	120.2	0.63	2 5 -0.1 3 0.5 26	
87.342	217.2	0.41	2 6 -0.2 3 0.8 26		82.346	117.3	0.61	2 6 -0.1 3 0.5 26	
87.350	215.4	0.48	2 5 -0.1 3 1.0 26		82.360	121.9	0.73	2 7 0.0 3 0.3 26	
87.322	217.2	0.45	3n 0.9 26-Inch		82.344	119.8	0.66	3n 0.4	26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

99

RST 3714					10 50.3 -15 00					B 1173					10 53.2 -23 35															
80.243	237.9	1.53	2 8	+0.2 3 1.8 36	80.249	313.9	1.01	2 9	+0.1 3 0.2 36	80.251	315.6	0.97	2 6	0.0 3 0.4 36																
80.246	237.7	1.58	2n	2.5 36-Inch	80.250	314.6	0.99	2n	0.3 36-Inch																					
RST 3717					10 50.4 -63 59					I 1206					10 55.4 -35 30															
80.224	37.4	0.21	2 7	+0.5 3 0.2 60	83.167	308.8	0.13	2 5	+0.6 2 60	83.170	312.4	0.15	2 6	+0.6 2 60	83.184	304.9	0.14	2 6	+0.4 2 60											
80.227	37.6	0.21	2 5	+0.2 3 60	83.174	308.7	0.14	3n	60-Inch																					
80.226	37.5	0.21	2n	0.2 60-Inch	No measures in 36 years. In the interim, the angle has increased by at least 135 degrees.																									
FIN 170					10 50.8 -59 20																									
80.224	160.4	0.29	2 7	+0.6 3 0.1 60	7982	BU 1076	10 55.7 +00 44	79.181	67.9	1.21	2 6	-0.3 3 2.8 26	79.219	73.7	1.12	2 5	0.0 3 3.0 26	80.095	71.5	1.07	2 5	-0.3 3 3.0 26								
80.227	164.6	0.27	2 4	+0.3 3 0.0 60	80.295	63.4	1.09	2 6	0.0 3 3.0 26	79.698	69.1	1.12	4n	3.0 26-Inch	Morel, 1970: +3.8, +0.10.															
83.173	155.0	0.23	2 6	+0.7 2 0.2 60																										
83.184	155.2	0.23	2 6	0.0 2 60																										
80.226	162.5	0.28	2n	0.0 60-Inch																										
83.178	155.2	0.23	2n	0.2 60-Inch																										
Considerable retrograde motion, but few measures.																														
7944	A 2372		10 51.0 +16 03																											
82.313	81.2	0.25	2 7	0.0 3 1.2 26	82.327	78.3	0.34	2 5	0.0 3 1.5 26	82.340	91.3	0.37	2 7	-0.3 4 1.2 26	82.343	85.2	0.30	2 5	-0.3 3 1.3 26	82.346	79.1	0.32	2 6	-0.1 3 1.4 26						
82.334	83.0	0.32	5n	1.3 26-Inch																										
Measures of this pair are discordant, probably due to the magnitude difference.																														
RST 3716					10 51.5 -10 26					I 306					10 55.8 -47 34															
80.249	255.0	0.21	2 9	0.0 3 0.0 36	80.249	162.4	1.39	2 7	+0.3 3 1.2 36	80.249	162.4	1.39	1n	1.2 36-Inch																
80.249	255.0	0.21	1n	0.0 36-Inch																										
D 14					10 51.8 -07 11					FIN 173					10 56.5 -54 52															
77.169	195.3	6.09	1 5	-0.2 3 2.5 26	80.224	42.5	0.39	1 7	+0.6 3 0.2 60	80.232	41.7	0.33	2 6	+0.4 3 0.3 60	80.228	42.1	0.36	2n	0.2 60-Inch											
77.281	195.5	5.99	1 6	0.0 3 2.2 26																										
77.225	195.4	6.04	2n	2.4 26-Inch																										
I 418					10 53.0 -63 05					POP 73					10 56.6 +33 19															
80.227	201.3	2.26	1 4	+0.4 3 0.2 60	87.273	205.2	0.77	2 8	0.0 3 26	87.342	202.5	0.67	2 5	-0.2 3 0.0 26	87.350	204.2	0.84	2 5	-0.2 3 26											
80.232	202.6	2.25	1 6	+0.8 3 0.3 60	87.322	204.0	0.76	3n	0.0 26-Inch																					
80.230	202.0	2.26	2n	0.2 60-Inch	7986	A 68	10 56.9 -02 56	82.313	107.9	0.31	2 6	0.0 3 0.1 26	82.327	112.5	0.35	2 5	0.0 3 0.0 26	82.340	122.6	0.30	2 5	-0.5 3 26	82.346	112.5	0.36	2 5	-0.1 3 0.1 26			
																				82.332	113.9	0.33	4n	0.1 26-Inch						

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

B 1174					10 57.6 -46 26					COU 960					11 00.9 +29 13				
80.240	72.8	0.69	2 8	+0.4 3 0.5 36						87.273	102.3	0.17	2 8	0.0 3 26					
80.243	74.5	0.51	2 7	+0.2 3 0.4 36						87.342	104.3	0.18	2 5	-0.1 3 26					
80.246	74.0	0.52	2 5	+0.1 3 0.4 36						87.350	106.0	0.19	2 5	0.0 3 26					
80.243	73.8	0.57	3n	0.4 36-Inch						87.322	104.2	0.18	3n	26-Inch					
B 1175					10 58.2 -35 40					RST 3723					11 01.6 -14 12				
80.240	246.9	0.75	2 8	+0.2 3 0.4 36						80.251	89.4	0.59	2 6	0.0 3 0.3 36					
80.243	247.7	0.64	2 8	+0.3 3 0.6 36						80.254	93.4	0.57	2 5	+0.2 3 0.5 36					
80.246	247.2	0.53	2 4	+0.3 3 0.5 36						80.252	91.4	0.58	2n	0.4 36-Inch					
80.243	247.3	0.64	3n	0.5 36-Inch															
7997	A 2375				10 58.5 +17 12					8025	H 177				11 02.1 -15 41				
76.342	238.8	0.20	2 8	0.0 3 0.0 26						80.240	23.0	3.02	2 9	0.0 3 0.3 36					
77.281	235.4	0.15	2 6	0.0 3 0.0 26						80.246	24.0	3.00	1 5	0.0 3 0.4 36					
76.812	237.1	0.18	2n	0.0 26-Inch						80.251	21.8	2.95	2 7	+0.1 3 0.2 36					
Couteau, 1973: +15.1, -0.04.										80.246	22.9	2.99	3n	0.3 36-Inch					
I 211					10 59.2 -33 44					8032	A 1590				11 03.5 +54 32				
80.240	213.5	1.87	2 9	+0.1 3 2.8 36						85.203	343.8	1.25	2 5	-0.5 3 0.4 26					
80.243	215.0	1.97	2 8	+0.4 3 2.5 36						85.318	342.2	1.32	2 5	-0.5 3 0.5 26					
80.242	214.2	1.92	2n	2.6 36-Inch						85.329	342.8	1.36	2 6	-0.2 3 0.6 26					
										85.351	342.5	1.24	2 5	-0.3 3 0.8 26					
										85.300	342.8	1.29	4n	0.6 26-Inch					
										Heintz, 1963: +2.8, +0.07.									
										Baize, 1985: -0.6, -0.10.									
8000	A 133				10 59.4 -07 20					8035	BU 1077				11 03.8 +61 45				
82.313	41.8	0.25	2 7	0.0 3 26						79.181	323.3	0.79	3 6	-0.2 3 3.0 26					
82.340	58.4	0.25	2 6	-0.3 4 0.0 26						79.372	320.8	0.83	3 5	+0.2 3 3.0 26					
82.346	49.7	0.30	2 5	0.0 3 26						80.295	313.4	0.80	3 7	0.0 3 3.0 26					
82.360	48.4	0.26	2 7	0.0 3 26						79.616	319.2	0.81	3n	3.0 26-Inch					
82.340	49.6	0.26	4n	0.0 26-Inch						Heintz, 1963: +1.0, -0.03.									
8008	A 134				11 00.1 -06 57					8043	STF 1504				11 04.0 +03 39				
76.344	330.8	1.73	3 5	0.0 3 0.1 26						86.230	299.3	1.24	2 4	0.0 3 26					
77.169	329.8	1.90	3 5	-0.2 3 0.1 26						86.249	299.4	1.29	2 4	+0.2 3 26					
77.281	331.0	1.80	1 5	0.0 3 0.2 26						86.252	300.6	1.37	2 6	-0.3 3 0.2 26					
76.931	330.5	1.81	3n	0.1 26-Inch						86.350	299.6	1.21	2 4	-0.2 3 0.5 26					
SEE 126					11 00.2 -43 23					86.270	299.7	1.28	4n	0.4 26-Inch					
80.243	166.5	0.90	2 8	+0.5 3 0.0 36															
80.246	167.4	0.89	2 5	+0.2 3 0.5 36															
80.249	166.0	0.97	2 9	+0.5 3 0.1 36															
80.246	166.6	0.92	3n	0.2 36-Inch															
I 864					11 00.4 -40 15					8048	A 676 BC				11 04.7 -04 13				
80.227	356.2	1.04	2 4	+0.4 3 60						80.224	302.8	0.24	2 7	+0.7 3 0.2 60					
80.232	355.5	0.99	2 6	+1.0 3 0.1 60						80.232	309.4	0.18	2 7	+0.4 3 0.2 60					
80.230	355.8	1.02	2n	0.1 60-Inch						80.228	306.1	0.21	2n	0.2 60-Inch					
										Eggen, 1967: + 8.9, +0.02.									
										Heintz, 1985: +16.3, +0.01.									
										An orbit by Docobo, Costa gives impossible residuals.									

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

101

	FIN 176			11 04.7 -58 42				RST 528			11 08.5 -50 30		
80.249	11.6	0.42	i 0 +0.4 3 0.8 36				83.173	354.2	0.36	2 5 +0.6 2 1.0 60			
80.249	11.6	0.42	1n 0.8 36-Inch				83.184	348.7	0.31	2 6 +0.3 2 0.7 60			
							83.178	351.4	0.34	2n 0.8 60-Inch			
	FIN 47			11 05.3 -27 17			No measures in 34 years. Angular decrease.						
80.224	42.0	0.18	2 7 +0.8 3 60										
80.232	45.6	0.17	2 7 +0.5 3 0.0 60										
80.228	43.8	0.18	2n 0.0 60-Inch				6075	ES 1642		11 09.5 +38 05			
van den Bos, 1957: +1.6, +0.03. The orbit can only be improved by interferometric observations.							76.344	43.8	1.23	2 5 +0.1 3 0.2 26			
							77.149	42.8	1.18	2 5 -0.3 3 0.2 26			
							77.169	42.9	1.25	2 6 -0.1 3 0.2 26			
							76.887	43.2	1.22	3n 0.2 26-Inch			
8052	A 69			11 05.5 -06 26				COU 176			11 10.0 +21 37		
76.344	68.9	1.49	2 4 0.0 3 0.8 26				82.346	84.6	0.73	2 5 0.0 3 0.6 26			
77.133	68.8	1.47	2 6 0.0 3 1.0 26				82.360	82.9	0.71	2 7 0.0 3 0.5 26			
77.169	69.4	1.48	2 5 -0.1 3 0.8 26				85.203	84.0	0.72	2 5 -0.5 3 0.8 26			
80.251	70.6	1.45	2 7 +0.2 3 1.0 36										
80.254	71.0	1.52	2 4 +0.2 1.5 36				83.303	83.8	0.72	3n 0.6 26-Inch			
76.882	69.0	1.48	3n 0.9 26-Inch										
80.252	70.8	1.48	2n 1.2 36-Inch										
	FIN 177			11 05.8 -59 19				HEI 60			11 10.0 +14 42		
							85.354	272.2	0.36	2 7 -0.2 3 0.4 26			
							86.252	265.3	0.31	2 5 -0.3 3 0.4 26			
80.249	280.6	2.90	2 7 +0.5 3 2.8 36				87.273	267.5	0.32	2 8 0.0 3 0.4 26			
80.249	280.6	2.90	1n 2.8 36-Inch				86.293	268.3	0.33	3n 0.4 26-Inch			
8056	A 1775			11 06.5 +26 53			8082	HJ 2562			11 10.7 +31 09		
82.313	64.7	0.24	2 7 +0.1 3 0.0 26				82.346	264.4	1.13	2 6 0.0 3 1.2 26			
82.327	76.7	0.24	2 6 -0.1 3 26				82.360	265.9	1.12	2 8 0.0 3 0.6 26			
82.346	74.6	0.25	2 5 0.0 3 0.5 26				85.203	263.8	1.00	2 5 -0.4 3 1.4 26			
82.360	64.9	0.24	2 7 -0.1 3 0.0 26										
82.336	70.2	0.24	4n 0.1 26-Inch				83.303	264.7	1.08	3n 1.1 26-Inch			
	HJ 4409			11 07.3 -42 38				RST 5352			11 11.8 -34 49		
80.246	261.8	1.36	4 4 +0.3 3 2.5 36				83.167	335.7	0.27	2 5 +0.5 2 0.3 60			
80.249	261.9	1.28	2 9 +0.7 3 2.5 36				83.170	331.6	0.29	2 6 +0.5 2 0.3 60			
80.248	261.8	1.32	2n 2.5 36-Inch				83.184	333.7	0.26	2 6 +0.4 2 0.2 60			
							83.174	333.7	0.27	3n 0.3 60-Inch			
Decrease in angle and separation.													
							8086	BU 220		11 12.5 -18 30			
	I 870			11 07.8 -41 07			80.224	333.4	0.22	2 5 +0.8 3 0.6 60			
80.246	76.7	1.70	2 5 +0.4 3 0.2 36				80.232	332.5	0.23	2 7 +0.5 3 0.4 60			
80.249	76.8	1.72	2 9 +0.7 3 0.2 36				80.228	333.0	0.22	2n 0.5 60-Inch			
80.248	76.8	1.71	2n 0.2 36-Inch				Costa, Docobo, 1983: +3.4, 0.00.						

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

8092	A 1353			11 13.6 +55 25			HJ 4423			11 16.5 -45 53		
78.064	232.7	0.27	2 5	0.0	3 0.7	26	80.227	275.6	2.58	2 4	+0.5 3 0.1	60
79.184	231.9	0.28	2 7	-0.2	3 0.5	26	80.232	276.9	2.67	2 6	+0.8 3 0.2	60
79.372	229.5	0.36	2 6	0.0	3 0.6	26						
85.354	228.4	0.38	2 7	-0.2	3 0.6	26	80.230	276.2	2.62	2n	0.2	60-Inch
87.342	220.8	0.45	2 5	-0.3	3 0.8	26						
87.350	217.0	0.43	2 5	-0.2	3 0.8	26						
87.372	222.7	0.39	2 6	-0.2	3 0.8	26	8114	A 5		1i	16.8 -05	09
78.873	231.4	0.30	3n	0.6	26-Inch		80.251	312.2	0.33	2 7	+0.1 3 0.2	36
86.854	222.2	0.41	4n	0.8	26-Inch		80.251	312.2	0.33	1n	0.2	36-Inch
Heintz,	1981: +0.7,	+0.01;	+0.7,	+0.02.			8119	STF 1523		11	18.2 +31	33
Baize,	1981: +2.5,	0.00;	+3.8,	+0.02.								
Starikova,	1985: -0.5,	-0.02;	-3.3,	-0.06.								
							77.108	109.2	2.93	2 5	-0.3 3 0.6	26
							77.133	109.4	3.04	2 7	0.0 3 0.5	26
8094	STF 1517		11	13.7 +20	08		77.149	109.9	3.09	2 4	-0.5 3 0.5	26
							77.169	109.7	3.05	2 6	0.0 3 0.6	26
85.351	144.8	0.45	2 5	-0.2	3 0.2	26	82.346	97.2	2.72	2 6	-1.2 3 0.5	26
85.354	148.1	0.46	2 7	-0.2	3 0.2	26	82.357	97.9	2.58	2 5	-0.9 3 0.5	26
85.384	149.7	0.40	2 6	+0.3	3 0.2	26	82.360	97.6	2.52	2 7	-0.7 3 0.4	26
86.252	145.4	0.51	2 6	-0.2	3 0.2	26	85.203	86.3	2.44	2 6	-0.4 3 0.5	26
							85.318	90.0	2.22	2 5	-0.6 3 0.4	26
85.585	147.0	0.46	4n	0.2	26-Inch		85.329	89.3	2.28	2 5	-0.2 3 0.3	26
							85.351	90.1	2.35	2 5	-0.7 3 0.3	26
							87.350	81.9	1.91	2 5	-0.2 3 0.5	26
	KUI 56		11	14.0 +08	04		87.358	80.7	1.67	2 6	-1.1 3 0.5	26
							87.372	81.2	1.71	2 6	-0.4 3 0.4	26
86.252	249.4	22.18	2 5	-0.1	3 5.5	26	77.140	109.6	3.03	4n	0.5	26-Inch
87.342	249.2	22.29	2 5	-0.2	3 5.0	26	82.354	97.6	2.61	3n	0.5	26-Inch
							85.300	89.4	2.32	4n	0.4	26-Inch
86.797	249.3	22.24	2n	5.2	26-Inch		87.360	81.3	1.76	3n	0.5	26-Inch
	DON 466		11	14.8 -23	06		Heintz, 1967: -1.1, -0.03; -1.2, -0.18;					
							-0.4, +0.05; +0.8, -0.10.					
83.154	216.3	2.83	2 5	+1.2	3 3.3	36	8120	A 2379 BC		11	18.2 +16	38
83.159	220.3	2.93	2 7	+1.0	3 4.0	36						
83.156	218.3	2.88	2n	3.6	36-Inch		81.341	276.2	0.36	2 5	-0.2 3	26
							82.327	279.8	0.38	2 5	-0.1 3 0.5	26
8103	STF 1519		11	15.6 +59	46		82.346	288.9	0.33	2 6	0.0 3 0.3	26
							82.360	284.0	0.31	2 8	0.0 3 0.2	26
76.344	288.5	1.53	2 5	0.0	3 1.2	26	82.094	282.2	0.34	4n	0.3	26-Inch
77.108	289.2	1.40	2 5	0.0	3 1.0	26						
77.169	289.2	1.41	2 6	-0.2	3 0.7	26	8128	STF 1527		11	19.0 +14	16
76.874	289.0	1.45	3n	1.0	26-Inch		85.252	39.7	1.18	2 5	-0.2 3 1.4	26
							87.273	39.9	1.05	2 8	0.0 3 0.9	26
8109	A 2157		11	16.2 +31	36		87.342	40.1	1.18	2 5	-0.2 3 0.6	26
							87.350	40.5	1.12	2 5	-0.2 3 0.6	26
76.342	358.0	1.25	3 8	-0.1	3 3.3	26	86.804	40.0	1.13	4n	0.9	26-Inch
80.295	6.1	1.24	1 6	+0.2	3 3.4	26						
82.313	3.1	1.34	2 7	0.0	3 3.0	26	Hopmann, 1960: +6.3, -0.18.					
79.650	2.4	1.28	3n	3.2	26-Inch							
							I 879			11	21.0 -54	30
	FIN 120		11	16.4 -59	35		80.243	123.1	0.30	2 7	+0.4 3 0.3	36
83.145	20.9	0.59	2 6	+0.8	3 0.2	36	80.249	116.0	0.26	2 9	+0.6 3 0.5	36
83.148	19.6	0.60	2 6	+0.2	3	36	80.244	119.6	0.28	2n	0.4	36-Inch
83.146	20.2	0.60	2n	0.2	36-Inch		Newburg, 1967: +6.8, +0.03.					

TABLE 2 (Cont.)

103

VOU 25			11 21.9 -34 15			8160	A 2575			11 26.5 +08 06		
83.167	237.4	0.39	2 5	+0.5	2 0.2 60	82.360						
83.170	243.4	0.39	2 6	+0.4	2 0.3 60	85.351	33.1	0.31	2 8	0.0 3	0.2 26	
83.176	238.2	0.37	2 5	+0.3	2 0.3 60	85.354	26.8	0.40	2 6	-0.2 3	0.0 26	
							29.5	0.38	2 7	0.0 3	0.2 26	
83.171	239.7	0.38	3n	0.3	60-Inch	84.355	29.8	0.36	3n	0.1	26-Inch	

This is the only measure.

	RST 2745		11 23.5 -31 35	83.143	326.7	0.36	2 5 +0.8 3 0.5 36
				83.145	326.5	0.48	2 6 +0.8 3 0.2 36
83.170	14.2	0.31	2 6 +0.5 2 0.2 60	83.148	329.6	0.45	2 6 +0.3 3 0.3 36
83.184	11.7	0.23	2 4 +0.3 2 60				
				83.145	327.6	0.43	3n 0.3 36-Inch

Couteau, 1962: +0.7, -0.06.

8148		STF 1536		11 23.9 +10 32	8167	A 138		11 27.3 -08 52
77.108	154.6	1.18	1 5	-0.1 3 2.2 26				
77.133	157.4	1.18	1 6	+0.2 3 2.0 26	82.360	219.3	1.76	2 7 0.0 3 0.9 26
77.149	157.9	1.26	1 4	-0.4 3 3.0 26	85.351	219.1	1.71	2 5 -0.1 3 1.2 26
77.169	157.6	1.07	1 5	0.0 3 2.5 26	85.354	220.6	1.81	2 5 +0.1 3 1.6 26
79.181	153.2	1.23	2 5	-0.1 3 2.0 26				
79.334	149.3	1.32	3 4	+0.2 3 2.5 26	84.355	219.7	1.76	3n 1.2 26-Inch
79.372	149.2	1.24	4 5	+0.1 3 2.5 26				
82.346	138.6	1.31	2 6	0.0 3 2.6 26				
82.357	135.8	1.37	2 5	-0.7 3 2.5 26				
82.360	139.6	1.28	2 6	-0.7 3 2.5 26				
85.203	133.6	1.32	2 5	-0.4 3 26		FIN 184		11 27.3 -59 15
85.329	129.3	1.47	2 4	0.0 3 2.5 26	80.243	61.6	0.64	2 7 +0.3 3 0.2 36
85.351	132.3	1.22	2 6	-0.5 3 2.4 26	80.246	61.0	0.60	2 4 +0.3 3 0.6 36
85.354	129.5	1.43	2 7	-0.1 3 2.8 26	80.249	63.5	0.75	2 8 +0.6 3 0.2 36
87.273	127.1	1.34	2 4	-0.1 3 2.5 26				
87.342	129.4	1.27	2 5	-0.2 3 1.8 26	80.244	62.0	0.66	3n 0.3 36-Inch
87.350	133.3	1.30	2 5	-0.1 3 2.4 26				
87.358	129.7	1.19	2 6	-1.0 3 2.2 26				
						Slight angular increase.		

Slight angular increase.

8170	MLB 208	11 28.1 +62 15
76.344	43.8 1.84	2 5 -0.1 3 0.4 26
77.133	44.2 1.61	2 7 -0.1 3 0.6 26
77.169	44.5 1.70	2 5 -0.3 3 0.6 26
76.882	44.2 1.72	3n 0.5 26-Inch
	I 886	11 28.5 -61 00
83.173	339.6 1.22	2 6 +0.3 2 1.4 60
83.176	342.8 1.29	2 5 +0.4 2 0.8 60
83.174	3/1.2 1.26	2n 1.1 60-Inch
	FIN 185	11 28.9 -54 53
83.173	190.4 3.02	2 5 +0.5 2 3.2 60
83.176	187.9 3.00	2 5 +0.5 2 3.5 60
83.174	189.2 3.01	2n 3.4 60-Inch

8155	A 137		11 25.5 -07 58			
80.246	91.0	0.41	2 5	+0.6 3	0.2 36	
80.251	96.2	0.41	2 7	0.0 3	0.2 36	
82.360	95.7	0.36	2 8	0.0 3	0.6 26	
85.351	102.5	0.51	2 5	-0.1 3	0.0 26	
85.354	101.4	0.52	2 5	0.0 3	0.3 26	
80.248	93.6	0.41	2n	0.2	36-Inch	
84.355	99.9	0.46	3n	0.3	26-Inch	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

8182	A 7	11 29.7 -06 18
30.246	225.8	0.22 2 5 +0.4 3 36
80.251	228.8	0.19 2 8 0.0 3 0.0 36
80.248	227.3	0.20 2n 0.0 36-Inch

No measures since my own in 1963. Continued angular decrease.

8185	BU 340	11 29.9 +03 12
86.252	8.2	4.23 1 4 -0.1 3 2.0 26
87.342	9.7	4.43 1 5 -0.2 3 2.4 26
87.350	8.6	4.28 4 2 0.0 3 2.0 26
86.981	8.8	4.31 3n 2.1 26-Inch

8189	STT 234	11 30.8 +41 17
79.181	104.7	0.20 2 7 -0.2 3 26
79.372	109.4	0.17 2 6 0.0 3 0.0 26
80.095	110.6	0.25 2 6 -0.5 3 26
80.295	111.8	0.20 2 6 -0.1 3 0.0 26
82.327	122.2	0.22 2 6 -0.2 3 26
82.343	130.1	0.25 2 6 -0.9 3 0.4 26
82.346	124.0	0.28 2 5 -1.1 3 0.3 26
82.360	129.3	0.24 2 7 -0.9 3 0.3 26
85.354	138.6	0.34 2 7 -0.5 3 0.7 26
85.384	136.0	0.29 2 6 0.0 3 0.5 26
87.273	139.0	0.39 2 7 -0.1 3 0.6 26
87.350	135.8	0.37 2 5 -0.2 3 0.5 26
87.372	136.1	0.33 2 6 -0.3 3 0.4 26
79.736	109.1	0.20 4n 0.0 26-Inch
82.360	126.4	0.25 4n 0.3 26-Inch
85.340	127.3	0.22 2n 0.4 26-Inch
87.332	137.0	0.36 3n 0.5 26-Inch

Couteau, 1987: -1.4, -0.03; +3.0, -0.03;
+4.0, -0.02; -1.3, -0.02.

	FM 44	11 31.7 -54 45
80.227	80.0	0.77 2 4 +0.4 3 0.0 60
80.230	80.8	0.77 2 5 +0.5 3 0.0 60
80.228	80.4	0.77 2n 0.0 60-Inch

Angular decrease.

8197	STT 235	11 32.4 +61 05
77.108	154.4	0.35 1 5 -0.1 3 1.2 26
77.133	155.9	0.36 1 7 0.0 3 1.2 26
77.169	155.9	0.31 1 6 -0.3 3 1.8 26
77.281	158.2	0.36 1 5 -0.2 3 1.2 26
78.064	167.4	0.27 1 5 -0.3 3 1.2 26
79.184	188.3	0.29 2 6 -0.5 3 1.2 26
79.372	191.2	0.31 2 6 -0.1 3 1.2 26
80.095	197.0	0.30 2 6 -0.5 3 1.2 26
80.295	200.4	0.28 1 6 -0.3 3 1.0 26
81.341	218.4	0.41 2 5 -0.4 3 1.5 26
82.131	231.4	0.39 2 6 -0.1 3 1.0 26
82.327	232.5	0.38 2 5 -0.2 3 1.0 26
82.343	224.3	0.34 1 6 -1.0 3 1.2 26
82.346	223.8	0.39 1 5 -1.2 3 1.3 26

85.329	260.3	0.46 2 5 -0.4 3 1.4 26
85.351	257.9	0.41 2 5 -0.6 3 1.1 26
85.354	259.5	0.51 2 7 -0.3 3 1.2 26
85.384	258.9	0.41 2 6 -0.1 3 1.6 26
87.273	273.1	0.54 2 7 0.0 3 1.4 26
87.342	272.0	0.61 2 5 -0.1 3 1.2 26
87.350	271.0	0.56 2 4 -0.1 3 1.2 26
87.372	273.4	0.52 2 6 -0.1 3 0.8 26

77.173	156.1	0.34 4n 1.3 26-Inch
78.873	182.3	0.29 3n 1.2 26-Inch
80.577	205.3	0.33 3n 1.2 26-Inch
82.332	228.0	0.38 4n 1.1 26-Inch
85.354	259.2	0.45 4n 1.3 26-Inch
87.334	272.4	0.56 4n 1.2 26-Inch

Heintz, 1972: -0.9, -0.03; -1.7, -0.06;
-5.1, -0.05; -4.2, -0.05;
+0.8, -0.08; +1.0, -0.01.

A later orbit by Starikova gives worse residuals.

8205	A 71	11 32.5 -05 24
80.251	240.5	2.16 2 8 +0.1 3 3.8 36
80.251	240.5	2.16 1n 3.8 36-Inch

	N20 23	11 32.7 -65 52
83.176	240.1	0.86 2 4 +0.5 2 0.8 60
83.184	239.0	0.91 2 6 +0.3 2 0.5 60
83.180	239.6	0.88 2n 0.6 60-Inch

8210	HU 727	11 33.3 +49 28
82.313	203.3	1.16 2 7 0.0 3 26
82.327	204.5	1.30 2 5 -0.1 3 0.2 26
82.346	203.7	1.22 2 7 0.0 3 0.2 26
82.329	203.8	1.23 3n 0.2 26-Inch

8213	A 139	11 33.5 -09 07
80.246	168.5	2.15 2 5 +0.3 3 1.4 36
80.251	167.2	1.98 2 8 +0.2 3 0.8 36
80.248	167.8	2.06 2n 1.1 36-Inch

8216	J 86	11 34.3 +04 07
79.181	95.4	2.29 2 5 -0.2 3 1.2 26
79.372	94.1	2.40 2 6 0.0 3 1.0 26
81.349	91.8	2.52 2 4 +0.1 3 1.3 26
79.967	93.8	2.40 3n 1.2 26-Inch

	B 1701	11 35.2 -20 33
83.148	213.3	0.54 2 6 +0.4 3 0.2 36
83.151	212.3	0.53 2 8 +0.3 3 0.1 36
83.150	212.8	0.54 2n 0.2 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

105

8259	BU 456	11 36.9 -12 21	8275	HU 888	11 42.8 +21 05
83.143	144.0 0.91	2 5 +0.8 3 0.3 36	85.351	167.6 0.60	2 5 -0.2 3 0.3 26
83.145	143.3 0.77	2 7 +0.7 3 0.3 36	85.354	168.8 0.61	2 5 0.0 3 26
83.151	143.6 0.85	2 8 +0.6 3 0.3 36	85.384	171.8 0.58	2 6 0.0 3 0.4 26
83.146	143.6 0.84	3n 0.3 36-Inch	85.363	169.4 0.60	3n 0.4 26-Inch
Scardia, 1982: +2.0, 0.00.			8276	HU 1135	11 43.2 +37 15
8244	HU 728	11 37.8 +49 49	82.313	340.0 0.63	2 5 0.0 3 0.6 26
76.342	113.2 0.31	3 7 0.0 4 0.6 26	82.327	337.2 0.44	2 5 -0.1 3 0.8 26
76.344	113.7 0.40	1 5 0.0 3 0.8 26	82.346	334.8 0.55	2 7 -0.1 3 0.6 26
77.377	113.6 0.34	3 6 -0.4 3 1.0 26	82.360	336.6 0.50	2 8 -0.1 3 0.5 26
76.688	113.5 0.35	3n 0.8 26-Inch	82.336	337.2 0.53	4n 0.6 26-Inch
	B 1702	11 39.2 -31 02		RST 3558a	11 44.6 -49 25
83.154	90.3 0.54	2 5 +0.5 3 0.2 36	80.230	240.0 0.16	2 6 +0.5 3 0.4 60
83.159	94.3 0.50	2 7 +1.0 3 0.2 36	80.232	247.0 0.13	2 5 +0.4 3 60
83.156	92.3 0.52	2n 0.2 36-Inch	83.167	267.2 0.14	2 5 +0.3 2 60
	B 1705	11 39.4 -65 24	83.170	262.0 0.24	2 6 +0.5 2 0.5 60
83.170	227.1 0.24	2 6 +0.4 2 0.7 60	80.231	243.5 0.14	2n 0.4 60-Inch
83.173	231.0 0.24	2 5 +0.4 2 0.8 60	83.168	264.6 0.19	2n 0.5 60-Inch
83.172	229.0 0.24	2n 0.8 60-Inch	Not even the direction of motion was evident from the early measures.		
More than a quadrant has been described.			Heintz, 1985: -0.7, -0.04; -5.2, -0.07.		
	I 307	11 39.5 -51 41		R 180	11 46.7 -53 09
83.176	41.6 0.80	2 5 +0.5 2 0.4 60	83.167	184.5 2.28	2 5 +0.3 2 1.4 60
83.184	41.0 0.90	2 7 +0.3 2 0.4 60	83.170	183.2 2.19	2 6 +0.6 2 1.2 60
83.180	41.3 0.85	2n 0.4 60-Inch	83.168	183.8 2.24	2n 1.3 60-Inch
8267	A 1356	11 40.9 -02 47	8302	BU 602	11 46.9 +15 00
80.251	290.2 1.42	2 8 +0.1 3 1.4 36	79.372	114.2 0.31	2 5 0.0 3 2.5 26
80.251	290.2 1.42	1n 1.4 36-Inch	82.313	107.8 0.37	2 5 0.0 3 2.4 26
	HDO 212	11 41.2 -61 08	82.346	118.2 0.51	2 5 0.0 3 1.7 26
83.170	323.4 1.00	2 6 +0.5 2 0.2 60	82.360	109.8 0.40	2 8 0.0 3 2.1 26
83.173	324.9 1.09	2 6 +0.5 2 0.2 60	81.598	112.2 0.42	4n 2.2 26-Inch
83.172	324.2 1.04	2n 0.2 60-Inch	8309	A 2380	11 47.9 -15 27
	ALD 106	11 42.4 -61 13	83.143	60.3 0.26	2 6 +0.8 3 0.0 36
80.227	115.4 2.83	2 5 +0.3 3 0.0 60	83.145	55.9 0.24	2 8 +0.7 3 0.0 36
80.230	115.8 2.78	2 5 +0.4 3 0.1 60	83.151	55.2 0.21	2 7 +0.6 3 36
80.278	115.6 2.80	2n 0.0 60-Inch	83.146	57.1 0.24	3n 0.0 36-Inch
				FIN 366	11 49.5 -46 04
			83.154	165.5 0.28	2 6 +0.5 3 36
			83.159	166.0 0.24	2 6 +1.0 3 36
			83.156	165.8 0.26	2n 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

	RST 1616		11 50.7 -41 37	8337	BU 794		11 53.7 +73 46
83.176	50.2	2.58	2 5 +0.5 2 2.6 60	85.354	239.6	0.19	2 6 -0.1 3 26
83.184	49.1	2.57	2 7 +0.3 2 1.8 60	85.384	226.3	0.23	2 5 -0.1 3 26
83.180	49.6	2.58	2n 2.2 60-Inch	85.369	233.0	0.21	2n 26-Inch
	HJ 191		11 51.2 +11 59		Heintz, 1963: +2.8, +0.01.		
85.351	271.0	24.25	2 5 -0.3 3 2.0 26	8344	A 75		11 54.1 +71 56
85.354	271.6	24.22	2 6 -0.1 3 1.5 26	85.354	197.0	0.24	1 6 0.0 3 0.7 26
85.352	271.3	24.24	2n 1.8 26-Inch	85.384	205.1	0.20	2 5 0.0 3 26
This is the only measure since the discovery in 1820.				87.273	196.1	0.22	1 6 -0.2 3 0.6 26
				87.372	200.5	0.21	1 5 -0.4 3 26
8323	HU 730		11 51.8 +50 32	86.346	199.7	0.22	4n 0.6 26-Inch
76.342	155.6	0.18	2 7 0.0 4 0.1 26		Baize, 1953: +3.3, -0.03.		
77.133	158.7	0.23	1 7 -0.1 3 0.0 26				
77.374	163.2	0.22	2 6 0.0 3 0.0 26		WOR 20		11 54.4 +15 16
77.377	152.4	0.24	3 5 -0.4 3 0.0 26	79.372	307.3	1.41	2 5 0.0 3 0.2 26
77.056	157.5	0.22	4n 0.0 26-Inch	82.313	305.5	1.57	2 6 0.0 3 0.3 26
	SEE 137		11 52.0 43 57	82.346	305.7	1.39	2 6 -0.1 3 0.2 26
83.154	322.1	1.64	2 6 +0.7 3 0.2 36	82.360	305.4	1.36	2 8 0.0 3 0.1 26
83.159	322.9	1.66	2 6 +1.0 3 0.3 36	81.598	306.0	1.43	4n 0.2 26-Inch
83.156	322.5	1.65	2n 0.2 36-Inch		Slow decrease in angle and separation.		
8330	A 1776		11 52.8 +43 36		HLD 114		11 55.0 -56 05
76.344	202.6	1.78	1 5 -0.1 3 2.0 26	80.227	174.4	3.51	2 5 +0.3 3 0.3 60
77.133	208.6	1.88	2 7 0.0 3 2.4 26	80.230	174.6	3.54	2 6 +0.5 3 0.2 60
77.374	211.6	2.01	2 5 +0.1 3 1.8 26	80.228	174.5	3.52	2n 0.2 60-Inch
77.377	206.1	1.90	3 5 -0.3 3 2.2 26	8355	SIT 241		11 56.3 +35 27
77.057	207.2	1.89	4n 2.1 26-Inch	87.342	141.2	1.75	2 5 -0.2 3 1.3 26
	HJ 4478		11 53.0 -33 54	87.350	138.2	1.64	2 4 -0.3 3 2.2 26
83.154	23.6	0.91	2 6 +0.3 3 0.6 36	87.372	141.0	1.56	2 6 -0.2 3 1.5 26
83.159	24.3	0.76	2 6 +1.1 3 0.4 36	87.355	140.1	1.65	3n 1.7 26-Inch
83.156	24.0	0.84	2n 0.5 36-Inch	8360	HU 1490		11 57.0 -25 28
	FIN 190		11 53.0 -57 02	80.240	58.2	0.95	2 8 +0.1 3 0.8 36
80.227	306.4	0.85	2 5 +0.2 3 0.2 60	80.243	57.7	0.74	2 7 +0.6 3 0.7 36
80.230	305.6	0.82	2 6 +0.5 3 0.2 60	80.249	61.0	0.90	2 9 +0.8 3 0.7 36
80.228	306.0	0.84	2n 0.2 60-Inch	83.151	55.8	0.86	2 6 +0.7 3 0.7 36
8332	A 2579		11 53.2 -15 40	83.156	59.3	0.89	2 4 0.0 3 0.6 36
83.143	63.6	0.32	2 5 +0.8 3 36	80.244	59.0	0.86	3n 0.7 36-Inch
83.145	65.4	0.35	2 6 +0.7 3 0.4 36	83.154	57.6	0.88	2n 0.6 36-Inch
83.151	63.5	0.34	2 7 +0.6 3 0.3 36		RST 3766		11 58.2 -10 21
83.146	64.2	0.34	3n 0.4 36-Inch	80.251	289.3	0.21	2 7 0.0 3 0.8 36
Baize, 1981: +2.8, +0.01.				80.251	289.3	0.21	1n 0.8 36-Inch

167

FIN 192				11 59.7 -63 24				RST 570				12 02.2 52 31			
83.173	268.8	0.34	2 4 +0.3 2 0.8 60	80.227	228.8	0.64	2 4 +0.3 3 0.2 60								
83.184	268.6	0.24	2 5 +0.2 2 60	80.230	225.8	0.61	1 6 +0.5 3 0.2 60								
				80.232	230.1	0.60	2 5 +0.2 3 60								
83.178	268.7	0.29	2n 0.8 60-Inch	80.230	228.2	0.62	3n 0.2 60-Inch								
This is the only measure since discovery 52 years ago. Direct motion.				SEE 143				12 03.6 -39 00							
8378	STI 243		11 59.9 +53 24	83.167	88.0	1.03	2 5 +0.3 2 0.4 60								
76.344	9.1	1.15	1 4 -0.1 3 1.0 26	83.170	86.6	0.98	2 6 +0.7 3 0.3 60								
77.133	10.4	1.09	1 7 0.0 3 1.2 26	83.176	89.2	1.03	2 6 +0.4 3 0.6 60								
77.374	9.9	1.23	1 5 0.0 3 0.8 26	83.171	87.9	1.01	3n 0.4 60-Inch								
77.377	8.2	1.10	1 6 0.5 3 1.0 26	Eggen, 1965: +3.4, +0.12.											
77.057	9.4	1.14	4n 1.0 26-Inch	8404	A 681		12 03.7 +25 07								
8394	80 457		12 01.4 -21 31	82.546	61.6	0.29	2 6 0.0 3 0.4 26								
80.240	90.0	1.83	2 8 0.0 3 1.4 36	82.360	56.6	0.24	2 7 0.0 3 0.5 26								
80.243	86.3	1.74	2 8 +0.6 3 1.4 36	85.354	50.3	0.30	2 6 0.0 3 0.4 26								
80.249	88.8	1.90	2 9 +0.8 3 1.2 36	83.353	56.2	0.28	3n 0.4 26-Inch								
80.244	88.4	1.82	3n 1.3 36-Inch	8415	A 1358		12 05.3 +56 47								
	RST 568		12 01.6 -49 58	76.342	46.2	0.56	2 6 +0.1 4 0.2 26								
80.246	87.6	1.97	4 5 +0.2 3 0.8 36	77.133	47.3	0.59	2 7 0.0 3 0.2 26								
83.167	87.5	1.92	2 4 +0.2 2 0.6 60	77.374	50.8	0.65	2 4 +0.1 3 0.2 26								
83.170	87.1	1.86	2 6 +0.5 2 0.2 60	77.377	50.4	0.59	2 5 -0.3 3 0.2 26								
80.246	87.6	1.97	1n 0.8 36-Inch	77.056	48.7	0.60	4n 0.2 26-Inch								
83.168	87.4	1.89	2n 0.4 60-Inch	8418	B 219		12 05.9 27 17								
	I 895		12 01.7 41 49	80.240	117.0	1.41	2 8 +0.2 3 0.0 36								
83.154	321.1	0.75	4 5 +0.6 3 36	80.243	116.8	1.30	2 7 +0.7 3 0.0 36								
83.159	317.1	0.77	2 6 +1.0 3 0.6 36	80.249	116.0	1.34	2 9 +0.8 3 0.1 36								
83.156	319.1	0.76	2n 0.6 36-Inch	83.145	117.1	1.44	2 6 +0.6 3 0.1 36								
	I 215		12 01.8 -34 39	83.151	119.1	1.45	2 7 +0.6 3 0.2 36								
83.154	102.7	0.86	2 6 +0.9 3 0.4 36	80.244	116.6	1.35	3n 0.0 36-Inch								
83.159	99.0	0.79	2 6 +1.1 3 1.2 36	83.148	118.1	1.44	2n 0.2 36-Inch								
83.156	100.8	0.82	2n 0.8 36-Inch	FIN 48				12 08.5 -56 17							
Valbousquet, 1980: +4.8, +0.17. Valbousquet was misled by his 1979 measure, which is 0.2" too small.				This is the only measure since discovery. Decrease in angle.				I 216				12 09.8 -51 47			
8396	A 2163		12 02.2 +21 08	80.246	30.7	1.00	2 5 +0.2 3 2.8 36								
82.360	164.0	0.61	2 8 -0.1 3 0.3 26	83.173	20.5	1.31	1 5 +0.3 2 2.0 60								
87.273	167.2	0.62	2 7 -0.2 3 0.2 26	83.176	27.3	1.14	2 5 +0.4 2 2.8 60								
87.342	154.6	0.49	2 5 -0.2 3 0.0 26	83.184	24.3	1.24	2 5 +0.2 2 3.0 60								
85.658	161.9	0.57	3n 0.2 26-Inch	80.246	30.7	1.00	1n 2.8 36-Inch								
				83.178	24.0	1.23	3n 2.6 60-Inch								

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

				STF 3079				12 10.6 -04 44								KST 1658				12 15.4 -31 05											
87.342				87.5	14.98	2 5	-0.1 3	0.8 26					80.224				304.0	0.58	2 6	+0.5 3	0.5 60										
87.372				87.3	15.13	2 5	0.0 3	0.7 26					80.230				304.9	0.51	2 5	+0.4 3	0.5 60										
87.357				87.4	15.06	2n	0.8	26-Inch					80.232				308.4	0.57	2 5	+0.2 3	0.5 60										
													83.143				333.9	0.30	2 6	+0.8 3	0.6 36										
													83.145				328.6	0.33	2 6	+0.8 3	0.5 36										
													83.151				326.5	0.31	2 6	+0.7 3	0.5 36										
8446				STF 1606				12 10.9 +39 54								80.229				305.8	0.55	3n	0.5	60-Inch							
79.372				264.2	0.33	2 6	0.0 3	0.5 26					83.146				329.7	0.31	3n	0.5	36-Inch										
81.349				256.3	0.30	2 5	-0.3 3	0.3 26					83.184				331.0	0.36	1n	0.8	60-Inch										
82.313				258.7	0.32	2 6	-0.1 3	0.5 26																							
82.327				260.5	0.27	2 6	-0.4 3	26																							
85.354				246.4	0.29	2 5	0.0 3	0.7 26																							
85.384				244.5	0.33	2 6	-0.2 3	0.6 26																							
87.273				243.2	0.26	2 8	-0.3 3	0.5 26																							
87.342				242.0	0.30	2 5	-0.2 3	0.7 26																							
87.372				236.7	0.28	2 6	0.0 3	26																							
81.340				259.9	0.30	4n	0.4	26-Inch					8485				HU 736				12 16.0 +48 07										
85.369				245.4	0.31	2n	0.6	26-Inch					76.342				234.2	0.19	2 6	0.0 4	0.0 26										
87.329				240.6	0.28	3n	0.6	26-Inch					77.133				247.4	0.23	2 5	+0.1 3	26										
													77.377				252.7	0.21	2 4	-0.3 3	0.0 26										
				van der Wiele, 1974: +1.1, -0.07; +1.3, 0.00; +2.8, -0.01.												76.951				244.8	0.21	3n	0.0	26-Inch							
				HU 1604				12 11.1 -53 02																							
83.167				318.1	0.33	2 5	+0.5 2	0.3 60					8486				STF 1621				12 16.0 +05 39										
83.170				316.4	0.28	2 5	+0.7 2	0.5 60					76.342				310.9	0.31	2 7	+0.1 3	0.3 26										
83.168				317.2	0.30	2n	0.4	60-Inch					77.133				318.2	0.34	2 7	0.0 3	0.2 26										
													77.404				323.2	0.35	2 6	+0.1 3	0.2 26										
													79.372				342.0	0.36	1 4	0.0 3	0.3 26										
8456				A 1780				12 12.0 +13 00								82.313				357.5	0.60	1 5	-0.1 3	0.6 26							
82.360				325.9	1.07	2 7	0.0 3	2.0 26					82.327				354.0	0.49	2 5	-0.3 3	0.5 26										
85.354				323.2	1.32	2 6	0.0 3	3.0 26					82.346				357.9	0.50	1 5	-0.1 3	0.5 26										
85.384				331.4	1.31	2 6	0.0 3	2.2 26					85.354				14.8	0.69	2 5	+0.1 3	26										
84.366				326.8	1.23	3n	2.4	26-Inch					87.273				12.7	0.67	1 6	-0.3 3	0.5 26										
													87.342				19.9	0.59	2 5	-0.1 3	26										
													87.372				14.1	0.63	1 5	0.0 3	26										
													76.960				317.4	0.33	3n	0.2	26-Inch										
													81.590				352.8	0.49	4n	0.5	26-Inch										
													86.835				15.4	0.64	4n	0.5	26-Inch										
80.246				56.3	0.90	2 5	+0.2 3	0.8 36																							
80.251				54.6	0.96	2 5	+0.6 3	0.6 36																							
80.248				55.4	0.93	2n	0.7	36-Inch																							
				HWE 72				12 13.6 -33 47																							
83.176				164.0	1.36	2 6	+0.4 2	2.0 60					8500				BU 796				12 17.5 +06 36										
83.184				162.0	1.46	2 5	+0.3 2	2.8 60					79.331				92.0	0.23	2 5	0.0 3	1.0 26										
83.180				163.0	1.41	2n	2.4	60-Inch					82.313				94.3	0.22	2 5	0.0 3	0.8 26										
													82.327				95.3	0.21	2 6	+0.1 3	0.8 26										
													81.324				93.9	0.22	3n	0.9	26-Inch										
8466				HU 735				12 13.8 -24 56								8504				HU 1138				12 17.9 +11 48							
83.145				182.0	0.62	2 6	+0.7 3	0.4 36					79.331				359.3	1.26	1 5	+0.1 3	0.4 26										
83.151				183.2	0.58	2 6	+0.7 3	0.2 36					82.327				4.3	1.20	2 5	-0.2 3	0.4 26										
83.148				182.6	0.60	2n	0.3	36-Inch					82.346				3.4	1.43	2 6	0.0 3	0.3 26										
													81.335				2.3	1.30	3n	0.4	26-Inch										

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

109

8508	A 2059	12 19.4 +17 44	8551	A 78	12 26.7 -05 75
82.360	12.0 0.50	2 7 -0.1 3 1.4 26	77.133	123.2 0.23	3 6 0.0 3 0.0 26
85.384	8.7 0.54	2 6 0.0 3 2.2 26	82.327	126.9 0.18	2 5 -0.2 3 26
83.872	10.4 0.52	2n 1.8 26-Inch	82.346	137.0 0.22	2 5 -0.1 3 0.5 26
	FIN 197	12 20.3 -63 41	82.360	141.9 0.18	2 7 0.0 3 26
83.154	86.3 0.33	2 5 +0.8 3 0.2 36	81.042	132.2 0.20	4n 0.2 26-Inch
83.159	81.3 0.29	2 5 +1.0 3 36	8553	STF 1643	12 27.2 +27 02
83.156	83.8 0.31	2n 0.2 36-Inch	82.327	11.6 2.52	2 6 -0.2 3 0.4 26
This is the only measure since discovery. Decrease in distance.			85.354	11.7 2.52	2 5 0.0 3 1.0 26
			85.384	12.1 2.50	2 5 0.0 3 0.2 26
8528	HLD 12	12 21.8 -02 37	84.355	11.8 2.51	3n 0.5 26-Inch
77.133	99.9 1.00	2 6 0.0 3 0.8 26	The Hopmann orbit is erroneous.		
79.331	102.1 0.88	2 4 +0.2 3 0.5 26		CPO 12 AXBC	12 28.3 -61 45
82.327	100.0 1.05	2 5 -0.2 3 0.5 26	80.240	209.8 2.14	2 8 +0.4 3 0.8 36
83.176	100.7 1.12	2 6 +0.4 2 0.7 60	80.243	207.2 2.12	1 7 +0.6 3 0.8 36
83.180	99.7 1.27	2 6 +0.3 2 0.6 60	80.249	210.9 2.03	2 8 +0.7 3 1.2 36
79.597	100.7 0.98	3n 0.6 26-Inch	83.167	202.3 2.08	4 5 +0.5 2 0.8 60
83.180	100.2 1.20	2n 0.6 60-Inch	83.170	204.4 2.00	2 5 +0.5 2 0.8 60
8539	STF 1639	12 24.4 +25 35	83.173	205.8 2.17	1 4 +0.3 2 1.2 60
86.408	326.9 1.61	2 7 -0.1 3 1.2 26	80.244	209.3 2.10	3n 0.9 36-Inch
86.422	327.4 1.52	2 6 +0.2 3 0.8 26	83.170	204.2 2.08	3n 0.9 60-Inch
86.427	328.1 1.56	2 7 -0.1 3 1.0 26		RST 4499 BC	
86.449	328.4 1.59	2 6 +0.6 3 1.4 26	80.240	228.0 0.25	2 8 +0.3 3 0.0 36
86.426	327.7 1.57	4n 1.1 26-Inch	80.243	229.5 0.24	2 7 +0.5 3 0.0 36
Aller, 1951: +3.2, +0.02.			80.249	223.6 0.17	2 8 +0.6 3 0.0 36
8546	STF 1642	12 25.8 +44 44	83.167	195.0 0.20	1 5 +0.4 2 0.2 60
76.344	179.1 2.52	4 4 -0.1 3 0.7 26	83.170	195.5 0.21	2 5 +0.4 2 60
77.377	180.6 2.49	2 5 -0.5 3 0.7 26	83.173	195.9 0.20	1 5 +0.2 2 60
79.698	180.5 2.61	2 4 0.0 3 0.8 26	80.244	227.0 0.22	3n 0.0 36-Inch
77.698	180.5 2.54	3n 0.7 26-Inch	83.170	195.5 0.20	3n 0.2 60-Inch
8548	BU 922	12 26.1 -04 28	Rapid motion, few measures.		
80.240	128.9 0.66	2 8 +0.1 3 1.2 36	8569	STF 251	12 29.2 +31 24
80.251	132.4 0.45	2 5 +0.1 3 0.6 36	77.169	55.1 0.54	1 5 +0.1 3 1.8 26
82.360	123.7 0.36	2 7 0.0 3 0.8 26	77.404	47.6 0.58	1 7 -0.4 3 1.4 26
80.246	130.6 0.56	2n 0.9 36-Inch	79.372	52.0 0.53	2 4 0.0 3 1.3 26
82.360	123.7 0.36	1n 0.8 26-Inch	79.425	52.6 0.53	2 7 +0.3 3 1.5 26
8549	HLD 13	12 26.5 -01 53	78.342	51.8 0.54	4n 1.5 26-Inch
82.360	138.6 1.36	2 7 -0.1 3 0.3 26	Baize, 1957: -1.0, -0.05.		
82.360	138.6 1.36	1n 0.3 26-Inch	8573	BU 28	12 30.1 -13 23
			83.151	324.1 1.85	2 7 +0.7 3 2.0 36
			83.184	321.7 1.84	2 7 +0.5 2 2.2 60
			83.151	324.1 1.85	1n 2.0 36-Inch
			83.184	321.7 1.84	1n 2.2 60-Inch
			da Silva, 1962: -0.3, -0.03; -2.7, -0.04.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

			I 82			12 31.4 -41 30			8626			BU 607			12 41.2 -01 28		
80.246	6.2	0.70	2	5	+0.5	3	0.8	36	82.327	307.8	0.89	2	6	-0.2	3	1.0	26
80.249	9.2	0.72	2	8	+0.7	3	1.0	36	82.346	310.6	0.95	2	5	-0.1	3	1.0	26
80.251	7.2	0.77	2	5	+0.4	3	0.5	36	82.360	304.6	0.82	2	6	0.0	3	1.0	26
80.249	7.5	0.73	3n	0.8				36-Inch	82.344	307.7	0.89	3n	1.0				26-Inch
8589	A 2060		12 32.2 +16 48						8630	STF 1670		12 41.7 -01 27					
76.342	43.0	0.55	2	7	0.0	3	0.0	26	76.344	299.3	4.08	3	4	-0.1	3	0.1	26
77.133	47.7	0.62	2	7	0.0	3	0.0	26	76.405	300.1	4.06	2	5	-0.7	3	0.0	26
77.404	50.0	0.58	2	6	0.0	3	0.0	26	77.169	299.7	4.27	2	4	-0.6	3	0.3	26
76.960	46.9	0.58	3n	0.0				26-Inch	77.377	299.3	4.11	2	4	-0.4	3	0.0	26
	RST 599		12 32.4 -47 41						77.404	299.4	4.01	2	6	-0.4	3	0.1	26
83.167	288.8	0.42	2	6	+0.6	2	0.2	60	77.423	298.9	4.05	2	5	-0.1	3	0.1	26
83.170	285.7	0.38	2	7	+0.6	2	0.2	60	82.313	294.4	3.67	2	6	0.0	3	0.0	26
83.168	287.2	0.40	2n	0.2				60-Inch	82.327	295.0	3.69	2	5	-0.1	3	0.0	26
	COU 595		12 34.0 +26 50						82.340	294.8	3.83	2	3	0.0	3	0.0	26
85.354	174.4	0.73	2	5	0.0	3	1.0	26	82.346	295.2	3.71	2	5	0.0	3	0.0	26
85.384	176.1	0.92	2	5	0.0	3	0.8	26	85.354	292.0	3.48	2	5	0.0	3	0.2	26
85.369	175.2	0.82	2n	0.9				26-Inch	85.384	291.4	3.28	2	6	-0.1	3	0.2	26
8597	LV 5		12 34.1 -18 11						86.408	290.5	3.23	2	7	0.0	3		26
80.251	347.2	1.13	2	5	+0.3	3		36	86.422	288.3	3.17	2	7	0.0	3	0.3	26
80.254	340.4	1.06	2	7	+0.2	3	2.2	36	86.427	291.2	3.10	2	7	-0.5	3	0.2	26
80.252	343.8	1.10	2n	2.2				36-Inch	86.449	290.9	3.11	2	6	0.0	3	0.2	26
	I 1222		12 36.9 -32 10						77.020	299.4	4.10	6n	0.1				26-Inch
80.224	222.9	0.40	2	5	+0.2	3		60	82.332	294.8	3.72	4n	0.0				26-Inch
80.230	222.4	0.34	2	5	+0.1	3	0.2	60	86.074	290.7	3.23	6n	0.2				26-Inch
80.227	222.6	0.37	2n	0.2				60-Inch	Strand, 1937: +0.5, -0.02; +0.1, +0.01; -0.6, +0.16.								
	B 1215		12 39.2 -40 22						8635	A 1851		12 42.1 +26 21					
83.167	51.0	0.22	2	6	+0.6	2	0.2	60	76.342	212.7	0.39	2	6	0.0	3	0.5	26
83.170	51.6	0.26	2	7	+0.6	2	0.2	60	76.405	213.4	0.36	1	6	-0.3	3	0.5	26
83.168	51.3	0.24	2n	0.2				60-Inch	77.133	217.5	0.38	1	7	0.0	3	0.6	26
Heintz, 1985: -0.4, -0.02.									77.169	223.8	0.38	2	5	+0.2	3	0.4	26
	DAW 63		12 39.7 -37 17						77.404	220.6	0.38	2	6	-0.2	3	0.3	26
80.224	329.9	0.47	2	5	+0.3	3	0.4	60	77.423	220.6	0.37	1	6	0.0	3	0.5	26
80.230	328.4	0.44	2	4	+0.3	3	0.5	60	82.313	245.7	0.42	2	6	0.0	3	0.6	26
80.232	326.8	0.39	2	4	0.0	3	0.5	60	82.327	245.1	0.34	2	6	-0.1	3	0.6	26
83.143	341.7	0.34	2	6	+0.8	3	0.5	36	82.346	245.8	0.44	2	5	-0.1	3	0.6	26
83.151	341.0	0.29	2	7	+0.9	3	0.3	36	82.360	245.8	0.38	2	7	0.0	3	0.5	26
83.159	338.9	0.31	2	6	+1.3	3	0.4	36	76.979	218.1	0.38	6n	0.5				26-Inch
80.229	328.4	0.43	3n	0.5				60-Inch	82.336	245.6	0.40	4n	0.6				26-Inch
83.151	340.5	0.31	3n	0.4				36-Inch	Heintz, 1984: -0.6, -0.02; +1.9, -0.04. Soulie, 1986: 0.0, -0.03; +3.1, -0.05. Better than the 1983 orbit by Costa and Docobo.								
Knipe, 1966: -19.5, +0.03; -19.5, -0.11. The orbit fails.									8636	HU 892		12 42.2 +14 31					
									76.405	175.8	0.67	1	6	-0.2	3	0.3	26
									77.133	175.4	0.67	1	7	0.0	3	0.0	26
									77.169	176.2	0.67	1	4	+0.2	3	0.0	26
									77.404	177.3	0.70	1	6	-0.1	3	0.0	26
									77.028	176.2	0.68	4n	0.1				26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

111

DAW 140									
12 44.7 -38 08									
80.224	20.2	1.94	2 6 +0.4 3 0.3 60						
80.230	22.1	1.84	2 4 +0.4 3 0.6 60						
83.173	19.8	1.87	2 3 +0.2 2 1.8 60						
83.184	20.6	1.75	2 5 +0.2 3 1.0 60						
80.227	21.2	1.89	2n 0.4 60-Inch						
83.178	20.2	1.81	2n 1.4 60-Inch						
8655 A 1783									
12 44.9 +43 25									
82.327	217.1	1.78	2 6 -0.1 3 0.3 26						
82.346	216.3	1.83	2 5 -0.1 3 0.0 26						
82.360	218.9	1.81	2 7 +0.1 3 0.0 26						
82.344	217.4	1.81	3n 0.1 26-Inch						
R 207									
12 46.3 -68 06									
80.240	28.2	1.53	1 8 +0.4 3 0.3 36						
80.243	31.4	1.31	2 8 +0.4 3 0.2 36						
80.246	31.2	1.48	4 5 +0.3 3 36						
80.243	30.3	1.44	3n 0.2 36-Inch						
Mourao, 1964: +0.5, +0.10.									
B 2301									
12 48.9 -20 13									
83.145	92.3	1.23	2 5 +0.5 3 0.7 36						
83.151	90.4	1.30	2 7 +0.6 3 0.6 36						
83.148	91.4	1.26	2n 0.6 36-Inch						
Direct motion, separation decreasing.									
FIN 201									
12 50.3 -75 06									
83.154	225.1	0.77	2 5 +0.5 3 0.7 36						
83.159	224.0	0.76	2 5 +0.6 3 0.8 36						
83.156	224.6	0.76	2n 0.8 36-Inch						
8695 STF 1687									
12 53.3 +21 14									
77.404	160.6	1.15	1 6 -0.1 3 2.8 26						
77.423	161.7	1.03	1 7 0.0 3 2.2 26						
78.398	162.8	0.98	1 6 0.0 3 2.6 26						
77.742	161.7	1.05	3n 2.5 26-Inch						
Heintz, 1973: +1.1, 0.00.									
8696 HU 894									
12 53.3 +13 10									
76.405	143.5	1.11	1 6 -0.2 3 0.1 26						
77.133	145.5	0.97	1 7 -0.1 3 0.0 26						
77.404	146.6	1.07	2 6 -0.2 3 0.2 26						
77.423	146.5	1.07	2 7 0.0 3 0.0 26						
77.091	145.5	1.06	4n 0.1 26-Inch						
FIN 66									
12 53.7 -57 40									
83.159	272.7	1.51	2 6 +0.7 3 0.5 36						
83.159	272.7	1.51	1n 0.5 36-Inch						
FIN 46									
12 54.1 -63 10									
80.224	118.2	1.19	2 5 +0.4 3 0.6 60						
80.230	117.8	0.98	2 3 +1.1 3 0.8 60						
80.227	118.0	1.08	2n 0.7 60-Inch						
RST 2819									
12 54.9 -85 08									
80.240	242.8	0.66	2 8 +0.4 3 0.5 36						
80.243	240.4	0.51	2 7 +0.4 3 0.5 36						
80.249	238.7	0.63	2 7 +0.4 3 0.5 36						
80.244	240.6	0.60	3n 0.5 36-Inch						
B 1724									
12 55.9 -60 55									
80.224	291.4	1.22	2 5 +0.5 3 0.4 60						
80.230	294.2	1.22	2 3 +1.1 3 0.8 60						
80.232	291.8	1.16	2 4 -0.2 3 0.4 60						
80.229	292.5	1.20	3n 0.5 60-Inch						
8709 A 2000									
12 56.3 +43 01									
82.327	51.7	1.04	2 6 -0.2 3 0.5 26						
82.346	48.7	0.90	2 6 -0.2 3 0.3 26						
82.360	51.4	1.11	2 7 0.0 3 0.2 26						
82.344	50.6	1.02	3n 0.3 26-Inch						
I 83									
12 56.7 -47 41									
83.151	224.4	0.80	2 8 +0.8 3 0.3 36						
83.154	227.4	0.77	2 5 +0.6 3 0.4 36						
83.152	225.9	0.78	2n 0.6 36-Inch						
van den Bos, 1953: +4.1, +0.04.									
COU 397									
12 57.5 +24 58									
85.384	53.3	0.59	2 5 -0.2 3 0.8 26						
86.408	68.1	0.50	2 7 -0.2 3 1.0 26						
86.422	61.1	0.51	2 6 0.0 3 1.0 26						
86.427	61.0	0.54	2 7 -0.1 3 1.0 26						
86.160	60.9	0.54	4n 1.0 26-Inch						
8715 A 146									
12 57.5 -09 45									
83.176	288.4	1.68	2 6 0.0 2 2.5 60						
83.184	289.7	1.85	2 5 +0.2 2 2.5 60						
83.180	289.0	1.76	2n 2.5 60-Inch						

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

8717	STN 27		12 57.8 -13 08	8751	STF 1711		13 02.9 +13 29
76.405	68.0	2.09	2 5 -0.2 3 0.2 26	85.354	334.2	0.55	2 6 -0.2 3 26
77.404	70.9	2.09	2 5 -0.1 3 0.2 26	85.384	342.1	0.52	2 6 -0.2 3 0.3 26
77.423	71.0	2.04	2 6 0.0 3 0.3 26	86.408	339.7	0.57	2 7 -0.2 3 0.3 26
77.077	70.0	2.07	3n 0.2 26-Inch	85.715	338.7	0.55	3n 0.3 26-Inch
8719	BU 926		12 58.5 -06 03		FIN 64		13 03.2 -56 06
83.176	270.0	2.58	2 5 +0.1 2 2.2 60	83.170	266.2	0.43	2 5 +0.4 2 0.6 60
83.184	270.4	2.50	2 7 +0.3 2 2.0 60	83.176	265.2	0.42	2 5 +0.3 2 0.7 60
83.180	270.2	2.54	2n 2.1 60-Inch	83.173	265.7	0.42	2n 0.6 60-Inch
	I 1224		13 00.0 -41 23	8757	BU 341		13 03.7 -20 35
83.167	7.2	0.19	2 6 +0.5 2 0.0 60	80.246	314.2	0.81	2 6 +0.2 3 0.2 36
83.170	4.9	0.19	2 7 +0.3 2 0.2 60	80.251	312.5	0.80	2 6 0.0 3 0.2 36
83.184	359.8	0.16	2 ' +0.3 2 60	80.254	314.1	0.83	2 7 -0.1 3 0.2 36
83.174	4.0	0.18	3n 0.1 60-Inch	80.249	313.6	0.81	3n 0.2 36-Inch
Motion still slow for this close pair,				8764	BU 798		13 04.0 -17 37
8735	BU 112 BC		13 00.6 +18 23	80.246	177.6	0.18	2 6 +0.3 3 36
76.405	296.4	2.06	2 5 -0.1 3 0.4 26	80.251	175.9	0.18	2 6 +0.1 3 0.3 36
77.404	300.0	2.01	2 6 -0.1 3 0.4 26	80.254	173.3	0.18	2 7 0.0 3 36
77.423	299.3	2.13	2 7 +0.1 3 0.4 26	80.249	175.6	0.18	3n 0.3 36-Inch
77.077	298.6	2.07	3n 0.4 26-Inch	8762	HU 642		13 04.5 -13 15
8739	BU 1082		13 00.7 +56 22	80.224	233.7	0.35	2 5 +0.5 3 60
76.405	39.0	1.31	1 6 0.0 3 2.7 26	80.232	232.8	0.32	2 6 +0.4 3 0.2 60
77.133	41.3	1.39	1 7 -0.1 3 2.8 26	83.145	236.3	0.31	2 5 +0.4 3 36
77.404	43.0	1.57	3 5 0.0 3 2.5 26	83.151	231.9	0.28	2 8 +0.2 3 0.0 36
77.423	43.0	1.21	1 7 +0.1 3 2.5 26	83.159	236.9	0.29	2 6 +0.7 3 0.2 36
82.327	55.6	1.40	2 6 0.0 3 2.2 26	80.228	233.2	0.34	2n 0.2 60-Inch
82.346	58.0	1.36	2 6 -0.2 3 2.0 26	83.152	235.0	0.29	3n 0.1 36-Inch
82.360	56.6	1.47	2 7 0.0 3 2.8 26	Dommanget, 1978: + 7.3; +0.07. +11.4; +0.02.			
86.427	61.5	1.36	2 7 -0.5 3 2.2 26	8772	BU 799		13 04.8 +73 02
86.449	69.6	1.65	2 5 -0.1 3 2.5 26	79.425	264.2	1.21	2 6 -0.3 3 2.2 26
86.460	64.8	1.41	2 7 -0.1 3 2.8 26	79.427	266.0	1.24	2 5 -0.2 3 2.4 26
86.463	64.1	1.46	2 5 +0.1 3 3.5 26	80.446	263.0	1.25	2 6 -0.1 3 1.3 26
77.091	41.6	1.37	4n 2.6 26-Inch	79.766	264.4	1.23	3N 2.0 26-Inch
82.344	56.7	1.41	3n 2.3 26-Inch	8773	HU 643		13 05.5 +50 59
86.450	65.0	1.47	4n 2.8 26-Inch	77.133	28.8	0.40	2 6 -0.1 3 0.3 26
Scardia, 1980: -0.8, +0.07; +5.7, +0.03; +7.8, +0.04.				77.423	33.6	0.36	2 7 +0.2 3 0.3 26
Heintz, 1981: -2.7, +0.05; +3.4, +0.02; +5.3, +0.03.				77.425	30.0	0.34	2 7 -0.1 3 0.5 26
	FIN 55		13 02.0 -54 43	77.997	30.8	0.37	3n 0.4 26-Inch
80.251	44.9	2.63	2 5 +0.4 3 2.3 36	Heintz has two measures of this pair which probably belong to a closer nearby system.			
80.254	46.8	2.65	2 6 +0.2 3 1.4 36				
80.252	45.8	2.64	2n 1.8 36-Inch				
This is the only measure since discovery.							

113

	I 916		13 06.6 -64 34		86.427	193.5	0.52	2 7 -0.5 3 0.1 26
83.176	54.1	0.48	2 4 +0.4 2 0.2 60		86.449	194.1	0.47	2 7 -0.3 3 0.0 26
83.184	50.9	0.42	2 6 +0.4 2 0.3 60		86.460	194.4	0.45	2 6 -0.3 3 0.1 26
83.180	52.5	0.45	2n 0.2 60-Inch		86.463	193.1	0.52	3 6 +0.1 3 0.1 26
	I 917		13 06.7 -46 02		76.778	192.2	0.21	4n 0.0 26-Inch
83.154	283.7	1.24	2 5 +0.6 3 0.2 36		79.947	193.2	0.49	4n 0.0 26-Inch
83.159	283.4	1.28	2 6 +0.9 3 0.4 36		82.320	194.1	0.72	2n 0.0 26-Inch
83.156	283.6	1.26	2n 0.3 36-Inch		85.369	191.2	0.69	2n 0.0 26-Inch
					86.460	193.8	0.49	4n 0.1 26-Inch
					Pavel, 1949:	+0.5,	0.00;	+1.5, +0.01;
						+2.3,	+0.12;	-0.7, +0.10;
						+1.9,	0.00.	
8785	A 1605		13 06.9 +52 00		8801	MCA 38 Aa		13 10.0 -05 32
79.425	168.3	0.95	2 6 0.0 3 0.0 26		77.423	332.2	0.40	1 6 +0.3 3 1.6 26
82.313	169.2	0.95	2 5 -0.2 3 0.2 26		79.427	329.0	0.40	1 5 -0.4 3 1.5 26
82.327	167.8	0.89	2 5 -0.2 3 0.2 26		79.466	329.5	0.58	3 5 +0.4 3 1.5 26
81.355	168.4	0.93	3n 0.1 26-Inch		78.772	330.2	0.46	3n 1.5 26-Inch
	HLD 118		13 07.9 -52 42			FIN 56		13 11.2 -55 22
80.251	204.4	1.22	2 5 +0.2 3 0.2 36		80.249	179.4	0.28	2 8 +0.5 3 0.2 36
80.254	202.6	1.30	1 6 0.0 3 0.4 36		80.251	182.1	0.27	2 4 +0.4 3 36
80.252	203.5	1.26	2n 0.3 36-Inch		80.250	180.8	0.28	2n 0.2 36-Inch
8791	STT 260		13 08.0 +26 57					Not observed since 1929. Decrease in angle and separation.
79.372	171.4	0.24	1 5 -0.5 3 0.0 26			SEE 170 AB		13 12.3 -59 55
79.427	171.8	0.27	2 5 -0.1 3 0.0 26		80.240	129.7	0.25	2 8 +0.2 3 0.5 36
82.313	177.0	0.23	2 5 0.0 3 0.0 26		80.243	132.2	0.25	2 7 +0.2 3 0.3 36
82.327	174.3	0.26	2 5 0.0 3 0.0 26		80.249	128.7	0.25	2 7 +0.2 3 0.8 36
85.354	179.0	0.24	2 5 -0.2 3 0.0 26		83.170	115.6	0.28	2 6 +0.3 2 0.7 60
85.384	181.0	0.26	2 5 -0.1 3 26		83.173	114.6	0.26	2 4 +0.1 2 0.5 60
86.422	181.8	0.25	2 6 -0.1 3 0.3 26		80.244	130.2	0.25	3n 0.5 36-Inch
86.427	186.3	0.20	2 7 -0.5 3 0.5 26		83.172	115.2	0.27	2n 0.6 60-Inch
80.860	173.6	0.25	4n 0.0 26-Inch		Finsen, 1964:	+23.9 +0.03;	+0.6,	+0.03.
85.897	182.0	0.24	4n 0.3 26-Inch			I 424 ABXC		
	FIN 204		13 09.3 -57 37		80.240	7.6	2.02	1 8 +0.3 3 2.5 36
80.251	84.8	2.13	2 5 +0.4 3 2.8 36		80.243	6.0	1.80	2 8 +0.4 3 2.2 36
80.254	85.7	2.15	2 5 +0.2 3 2.2 36		80.249	7.7	1.85	2 8 +0.3 3 1.5 36
80.252	85.2	2.14	2n 2.5 36-Inch		80.244	7.1	1.89	3n 2.1 36-Inch
8804	STF 1728		13 10.0 +17 31		8818	HWE 27		13 13.0 -29 06
76.262	193.5	0.17	3 5 0.0 4 0.0 26		83.173	290.7	2.87	2 5 0.0 2 2.2 60
76.342	191.4	0.18	3 7 0.0 3 0.0 26		83.176	293.2	2.77	2 6 0.0 2 1.5 60
77.133	191.2	0.25	1 6 -0.1 3 0.0 26		83.174	292.0	2.82	2n 1.8 60-Inch
77.377	192.9	0.25	1 4 0.0 3 0.0 26					
79.427	191.7	0.40	2 7 -0.7 3 0.0 26					
79.466	194.6	0.55	2 5 0.0 3 0.0 26					
80.446	192.2	0.50	2 5 -0.4 3 0.1 26					
80.449	194.3	0.51	2 3 -0.5 3 0.0 26					
82.313	194.1	0.76	2 5 0.0 3 0.0 26					
82.327	194.1	0.68	2 5 +0.1 3 0.0 26					
85.354	191.7	0.73	2 5 -0.2 3 0.0 26					
85.384	190.8	0.65	2 5 -0.1 3 0.0 26					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

I 1227					13 13.4 -50 42
83.170	68.1	0.11	2 5	+0.4 2	60
83.173	77.0	0.10	2 5	+0.3 2	60
83.184	68.0	0.13	2 6	+0.5 2	60
83.176	71.0	0.11	3n		60-Inch

Rapid motion.

RST 3827					13 14.1 -16 34
80.224	261.9	1.17	2 5	+0.6 3 0.0	60
80.232	262.4	1.28	2 6	+0.5 3 0.1	60
80.228	262.2	1.22	2n	0.1	60-Inch

B 1					13 15.1 +27 25
85.354	97.2	3.48	2 6	-0.1 3 0.4	26
86.422	96.1	3.43	2 6	+0.1 3 0.5	26
85.888	96.6	3.46	2n	0.4	26-Inch

FIN 206					13 16.5 -57 21
80.243	301.8	0.58	2 7	+0.4 3 0.2	36
80.249	291.0	0.60	2 7	+0.5 3 0.2	36
80.251	297.6	0.55	2 4	+0.4 3	36
80.248	296.8	0.58	3n	0.2	36-Inch

I 1567					13 16.9 -34 36
80.243	274.6	0.15	2 7	+0.6 3	36
80.249	265.5	0.21	2 7	+0.6 3 0.3	36
83.145	246.5	0.22	2 7	+0.8 3 0.0	36
83.151	248.5	0.25	2 7	+0.7 3 0.0	36
83.154	242.3	0.22	2 7	+0.7 3 0.2	36

80.246	270.0	0.18	2n	0.3	36-Inch
83.150	245.8	0.23	3n	0.1	36-Inch

Heintz, 1985: +2.6, -0.06; -3.4, +0.01.

8844	BU 222		13 17.4 -21 33			
83.145	21.8	1.79	2 7	+0.7 3	0.8 36	
83.159	19.7	1.88	2 8	+0.9 3	0.8 36	
83.152	20.8	1.84	2n	0.8	36-Inch	

RST 4977					13 17.6 -36 57
83.145	169.0	1.30	2 7	+0.8 3 0.2	36
83.154	168.3	1.24	2 5	+0.6 3 0.4	36
83.150	168.6	1.27	2n	0.3	36-Inch

This is the only measure since discovery.
Angular increase.

FIN 207					13 19.4 -58 46
83.173	93.2	4.76	2 5	+0.1 2 0.8	60
83.176	93.0	4.83	2 5	+0.3 2 2.2	60
83.174	93.1	4.80	2n	1.5	60-Inch

8862	HU 644			13 19.7 +47 46		
77.133	273.8	1.28	2 7	-0.2 3 1.4	26	
77.404	272.6	1.39	2 5	-0.2 3 0.8	26	
77.423	272.5	1.29	2 7	0.0 3 0.6	26	
78.398	272.8	1.39	2 6	-0.3 3 0.9	26	
79.372	273.3	1.62	2 5	-0.7 3 0.8	26	
79.425	272.8	1.51	2 7	-0.2 3 0.6	26	
82.313	270.8	1.53	2 5	-0.3 3 1.0	26	
82.327	271.2	1.67	2 5	-0.2 3 0.8	26	
82.340	270.6	1.65	2 7	0.0 4 1.0	26	
82.346	269.2	1.43	2 6	-0.3 3 0.8	26	
85.354	267.9	1.41	2 6	-0.1 3 0.6	26	
85.384	268.0	1.72	2 5	-0.1 3 1.2	26	
86.408	267.7	1.34	2 7	-0.2 3 1.5	26	
86.422	268.1	1.37	2 7	-0.2 3 1.2	26	

77.320	273.0	1.32	3n	0.9	26-Inch
79.065	273.0	1.51	3n	0.8	26-Inch
82.332	270.4	1.57	4n	0.9	26-Inch
85.892	267.9	1.46	4n	1.1	26-Inch

Heintz, 1976: +0.6, -0.01; +1.6, +0.04;
+0.6, +0.06; 0.0, +0.13.
Soulie, 1986: -0.2, -0.01; +0.8, +0.04;
-0.1, +0.13; -0.6, +0.09.

SLR 18					13 22.9 -47 56
83.145	241.7	0.63	2 7	+1.0 3 0.3	36
83.151	243.7	0.65	2 7	+0.7 3 0.2	36
83.148	242.7	0.64	2n	0.2	36-Inch

FIN 209					13 23.3 -61 04
80.243	168.8	0.31	2 7	+0.4 3 0.5	36
80.243	168.8	0.31	1n	0.5	36-Inch

This is the only measure since discovery
in 1928. Decrease in angle.

8887	HO 260			13 23.6 +29 14		
82.313	73.4	1.19	2 6	-0.1 3	0.0 26	
82.327	74.9	1.20	2 5	-0.1 3	0.4 26	
82.340	72.6	1.18	2 7	+0.1 4	0.2 26	
82.327	73.6	1.19	3n	0.2	26-Inch	

Ambruster, 1978: +0.3, +0.12.

RST 3837					13 24.5 -10 26
80.224	225.4	0.38	2 5	+0.9 3 0.4	60
80.232	219.7	0.33	2 5	+0.6 3 0.2	60
80.228	222.6	0.36	2n	0.3	60-Inch

115

Finsen, 1964: +9.1, +0.01; +4.2, +0.04.

Zulevic, 1969: -0.9, -0.02.

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

8946	A 1792	13 34.0 +08 47
79.425	310.3	0.56 2 7 0.0 3 0.6 26
82.313	309.7	0.67 2 5 -0.1 3 0.8 26
82.340	311.6	0.54 2 6 +0.1 4 0.4 26
86.422	309.3	0.57 2 6 0.0 3 0.6 26
86.427	310.5	0.55 2 7 -0.3 3 0.6 26
86.449	313.2	0.64 2 6 0.0 3 0.5 26
81.359	310.5	0.59 3n 0.6 26-Inch
86.433	311.0	0.59 3n 0.6 26-Inch

	RST 3844	13 34.2 -16 24
80.246	46.4	0.19 2 6 0.0 3 36
80.254	31.5	0.21 2 7 +0.2 3 0.0 36
80.250	39.0	0.20 2n 0.0 36-Inch
8949	STF 1757	13 34.3 -00 19
77.374	113.5	2.38 2 4 0.0 3 1.2 26
77.377	112.6	2.46 2 3 -0.3 3 1.0 26
77.423	113.4	2.37 2 6 0.0 3 0.8 26
77.391	113.2	2.40 3n 1.0 26-Inch

Heintz, 1956: +0.4, +0.16.

8950	BU 114	13 34.3 -08 37
83.173	162.9	1.36 2 5 +0.2 2 0.3 60
83.176	163.8	1.32 2 5 +0.2 2 0.4 60
83.184	161.6	1.28 2 6 +0.5 2 0.3 60
83.178	161.6	1.28 3n 0.3 60-Inch
8954	BU 932	13 34.7 -13 13
80.224	49.7	0.39 2 5 +0.8 3 0.5 60
80.232	50.7	0.29 2 7 +0.1 3 0.5 60
83.173	49.2	0.33 2 6 +0.3 2 0.4 60
83.184	49.6	0.27 2 7 +0.6 2 0.5 60
80.228	50.2	0.34 2n 0.5 60-Inch
83.178	49.4	0.30 2n 0.4 60-Inch

Heintz, 1969: +4.0, 0.00; +1.5, -0.05.

8962	DAW 108	13 36.2 -29 40
80.246	310.2	0.81 2 6 +0.1 3 0.3 36
80.246	310.2	0.81 1n 0.3 36-Inch
	I 221	13 36.8 -32 25
80.227	121.4	0.68 2 5 +0.4 3 1.0 60
80.232	121.4	0.67 2 6 +0.7 3 0.4 60
80.230	121.4	0.68 2n 0.7 60-Inch

	I 365	13 37.2 -61 42
80.240	169.6	0.29 2 7 +0.2 3 0.3 36
80.243	174.0	0.32 2 7 +0.6 3 0.2 36
80.246	172.5	0.35 2 4 +0.5 3 36
83.151	157.7	0.40 2 7 +0.6 3 36
83.159	151.3	0.30 2 6 +0.9 3 0.2 36
80.243	172.0	0.32 3n 0.2 36-Inch
83.155	159.5	0.35 2n 0.2 36-Inch

Abrami, 1952: -0.7, -0.03; +0.3, -0.01.

8974	STF 1768	13 37.5 +36 17
82.313	102.2	1.83 2 6 -0.1 3 1.4 26
82.327	102.6	1.74 2 5 -0.2 3 1.5 26
82.346	101.4	1.69 2 7 -0.2 3 1.7 26
82.360	101.9	1.94 2 5 -0.2 3 1.4 26
86.427	100.8	1.68 2 8 -0.1 3 2.4 26
86.449	104.0	1.86 2 6 -0.4 3 1.8 26
86.460	101.2	1.76 2 7 -0.4 3 1.8 26
86.463	102.4	1.71 2 7 -0.2 3 1.7 26
82.336	102.0	1.80 4n 1.5 26-Inch
86.450	102.1	1.75 4n 1.9 26-Inch

Wierzbinski, 1955: -1.3, -0.03;
0.2, -0.09.

8978	BU 934	13 37.6 +50 27
76.262	265.8	1.23 2 5 0.0 3 0.1 26
76.405	263.3	1.35 2 6 -0.1 3 0.1 26
77.133	266.0	1.11 2 7 0.0 3 0.0 26
77.404	266.6	1.31 2 5 -0.2 3 0.0 26
76.801	265.4	1.25 4n 0.0 26-Inch
8979	STF 1770	13 37.7 +50 42
76.262	123.7	1.65 2 5 0.0 3 1.3 26
76.405	121.6	1.70 3 7 0.0 3 1.4 26
77.133	123.6	1.68 2 7 0.0 3 1.2 26
77.404	122.8	1.78 2 5 -0.1 3 1.3 26
76.801	122.9	1.70 4n 1.3 26-Inch

	SEE 184	13 37.8 -35 04
80.227	302.9	3.12 2 5 +0.5 3 2.0 60
80.232	303.0	3.16 2 5 +0.4 3 1.6 60
80.230	303.0	3.14 2n 1.8 60-Inch
	FIN 214	13 38.4 -61 20
83.151	126.1	0.70 2 6 +0.8 3 0.5 36
83.159	128.5	0.63 2 7 +1.0 3 0.6 36
83.155	127.3	0.66 2n 0.6 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

117

8986	HU 645	13 39.0 +21 27
82.313	31.1 0.50	2 5 0.0 3 26
82.327	21.5 0.68	2 5 -0.1 3 26
82.346	24.7 0.70	2 6 -0.2 3 0.2 26
82.329	25.8 0.63	3n 0.2 26-Inch

8987	BU 612	13 39.5 +10 45
79.425	174.9 0.18	2 6 0.0 3 26
79.466	167.0 0.23	1 6 +0.1 3 0.0 26
79.488	167.6 0.24	4 5 +0.8 3 0.0 26
82.346	196.4 0.34	2 6 -0.2 3 0.0 26
82.360	198.7 0.29	2 5 +0.1 3 0.0 26
86.422	216.9 0.34	2 7 0.0 3 0.0 26
86.427	213.1 0.35	2 7 -0.2 3 0.0 26
86.449	221.3 0.30	2 7 0.0 3 0.0 26
86.460	215.4 0.33	2 6 -0.3 3 0.1 26
79.460	169.8 0.22	3n 0.0 26-Inch
82.353	197.6 0.32	2n 0.0 26-Inch
86.440	216.7 0.33	4n 0.0 26-Inch

Churms, 1954: -11.6, -0.01; -2.4, +0.01.
- 1.9, 0.00.
Danjon, 1956: -13.7, +0.02; -4.3, +0.03.
- 2.1, +0.02.

9019	STF 1781	13 46.1 +05 07
77.133	79.0 0.25	2 7 -0.1 3 0.3 26
77.404	75.8 0.24	2 5 -0.2 3 0.2 26
77.423	78.3 0.25	2 6 0.0 3 0.4 26
77.472	85.3 0.25	2 4 +0.2 3 0.3 26
78.398	87.4 0.24	2 5 0.0 3 0.3 26
78.469	88.8 0.25	2 8 +0.2 3 0.4 26
79.425	101.1 0.28	2 6 -0.1 3 0.2 26
79.466	99.7 0.29	2 6 +0.1 3 0.3 26
80.405	106.1 0.30	2 5 0.0 3 26
80.446	108.7 0.23	2 4 -0.3 4 26
80.449	107.4 0.23	2 5 -0.2 3 0.3 26
82.313	124.6 0.28	2 5 0.0 3 26
82.327	121.1 0.26	2 5 -0.1 3 26
82.340	123.8 0.25	2 5 +0.1 4 26
82.346	121.4 0.31	2 6 -0.1 3 0.2 26
85.354	140.7 0.39	2 6 -0.1 3 0.2 26
86.408	142.7 0.40	2 7 +0.2 3 0.2 26
86.422	143.7 0.38	2 6 0.0 3 0.5 26
86.427	143.5 0.41	2 7 -0.2 3 0.3 26
77.358	79.6 0.25	4n 0.3 26-Inch
78.940	94.2 0.27	4n 0.3 26-Inch
80.433	107.4 0.25	3n 0.3 26-Inch
82.332	122.7 0.28	4n 0.2 26-Inch
86.153	142.7 0.40	4n 0.3 26-Inch

Heintz, 1985: +2.0, -0.02; +0.8, -0.01;
+0.4, -0.05; +1.1, -0.05;
+0.6, -0.03.
Replaces the 1976 version.

9004	STF 3081	13 45.1 -11 50
82.313	68.6 2.16	2 5 0.0 3 0.1 26
82.327	69.5 2.18	2 4 -0.2 3 0.2 26
82.340	70.6 2.07	2 5 +0.2 4 0.6 26
82.327	69.6 2.14	3n 0.3 26-Inch

	RST 2864	13 45.1 -18 05
80.224	119.8 0.30	2 5 +0.8 3 0.4 60
80.232	113.6 0.35	2 5 +0.6 3 0.0 60
80.228	116.7 0.32	2n 0.2 60-Inch

This K5 dwarf of sizeable proper motion
has exhibited only slow angular increase.

9026	A 2492	13 47.8 +01 20
76.405	26.5 0.78	2 6 -0.1 3 0.2 26
77.404	28.4 0.73	1 5 -0.2 3 0.0 26
77.423	26.1 0.82	1 6 0.0 3 0.3 26
77.077	27.0 0.78	3n 0.2 26-Inch

9029	A 13	13 48.5 -05 26
77.404	167.1 1.12	1 4 -0.1 3 1.2 26
77.423	165.0 1.06	1 5 0.0 3 0.8 26
78.398	164.8 1.04	1 5 -0.1 3 0.8 26
80.246	162.5 1.01	2 5 +0.1 3 1.2 36
80.251	164.6 1.15	1 5 +0.2 3 1.0 36
80.254	164.5 1.17	2 7 0.0 3 0.8 36
77.742	165.6 1.07	3n 0.9 26-Inch
80.250	163.9 1.11	3n 1.0 36-Inch

9013	BU 115	13 45.4 +09 04
82.346	253.0 1.58	2 6 -0.1 3 2.4 26
85.354	257.0 1.66	2 6 -0.1 3 2.0 26
86.408	253.7 1.71	2 6 +0.3 3 2.5 26
84.703	254.6 1.65	3n 2.3 26-Inch

9031	STF 1785	13 49.1 +26 59
77.133	157.8 3.35	2 8 0.0 3 0.3 26
77.404	158.9 3.41	2 6 0.0 3 0.4 26
77.423	157.5 3.39	2 6 +0.1 3 0.3 26
77.320	158.1 3.38	3n 0.3 26-Inch
Strand, 1955: +0.6, -0.01.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

	I 1236		13 50.6 -41 01		R 227		13 56.4 -54 07
80.227	165.0	0.66	2 5 +0.4 3 60	80.240	7.0	1.92	2 8 +0.5 3 0.7 36
80.232	163.3	0.70	2 4 +0.7 3 0.2 60	80.243	5.1	1.78	2 6 +0.9 3 0.8 36
				80.249	7.0	1.78	2 8 +0.4 3 1.0 36
80.230	164.2	0.68	2n 0.2 60-Inch				
				80.244	6.4	1.83	3n 0.8 36-Inch
9037	BU 613		13 51.4 +34 41	9066	STF 1792		13 57.1 +12 27
77.133	151.5	0.66	2 7 0.0 3 0.0 26	80.405	291.7	2.03	2 5 -0.1 3 0.6 26
77.404	150.6	0.68	1 6 0.0 3 0.0 26	80.446	292.5	2.00	2 5 -0.3 4 0.8 26
77.423	152.0	0.73	2 6 +0.2 3 0.0 26	80.449	293.2	2.22	2 4 -0.2 3 0.8 26
77.320	151.4	0.69	3n 0.0 26-Inch	80.433	292.5	2.08	3n 0.7 26-Inch
	BU 343		13 52.0 -31 37		FIN 370		13 57.4 -62 29
80.240	27.5	0.77	2 8 +0.6 3 1.0 36	80.224	63.8	0.15	2 5 +0.7 3 60
80.243	33.2	0.61	2 7 +1.0 3 0.6 36	80.227	61.8	0.18	3 5 +0.4 3 0.0 60
80.249	29.5	0.49	2 7 +0.8 3 1.1 36				
				80.226	62.8	0.16	2n 0.0 60-Inch
80.244	30.1	0.62	3n 0.9 36-Inch				
More than a quadrant has been described.				No measures since Finsen's in 1967. One revolution has been completed. Period 20 years.			
	HWE 28		13 53.6 -35 40	9071	A 1614		13 57.6 +52 00
80.240	304.1	0.94	2 8 +0.5 3 0.2 36	80.405	312.2	1.33	2 5 0.0 3 0.1 26
80.243	305.8	0.92	2 7 +0.8 3 0.3 36	80.446	312.4	1.22	2 5 -0.6 4 0.1 26
80.246	301.8	0.99	2 5 +0.3 3 0.1 36	80.449	316.8	1.21	2 4 -0.4 3 0.0 26
83.151	302.6	0.90	2 7 +0.6 3 0.2 36	86.427	310.2	1.32	2 7 -0.3 3 26
83.155	302.3	0.91	2 7 +0.9 3 0.4 36	86.449	310.1	1.31	2 7 -0.2 3 0.0 26
				86.460	311.1	1.34	2 6 -0.4 3 0.2 26
80.243	303.9	0.95	3n 0.2 36-Inch	86.463	310.6	1.26	2 7 -0.3 3 0.1 26
83.155	302.4	0.90	2n 0.3 36-Inch				
Heintz, 1969: -1.8, +0.17; -4.7, +0.09.				80.433	313.8	1.25	3n 0.1 26-Inch
				86.450	310.5	1.31	4n 0.1 26-Inch
				Mourao, 1963: +0.4, -0.02; -0.8, -0.04. Quadrant reversed.			
	RST 3852		13 53.9 -14 40	9070	A 2586		13 57.7 -02 47
80.254	149.7	0.20	2 7 0.0 3 36	83.159	342.1	0.27	2 6 +0.5 3 0.4 36
83.159	144.5	0.15	2 7 +0.4 3 36	83.170	339.3	0.27	2 5 +0.2 2 0.5 60
83.170	141.4	0.16	2 6 +0.2 2 60	83.173	340.4	0.29	2 5 +0.2 2 0.4 60
83.173	143.4	0.14	2 6 0.0 2 60				
				83.159	342.1	0.27	1n 0.4 36-Inch
81.706	147.1	0.18	2n 36-Inch	83.172	340.4	0.29	2n 0.4 60-Inch
83.172	142.4	0.15	2n 60-Inch				
	I 401		13 55.0 -42 35		RST 671		13 57.9 -48 43
80.246	288.6	0.29	2 5 +0.4 3 0.3 36	80.224	169.8	0.46	2 5 +1.0 3 60
80.249	288.2	0.24	2 8 +0.3 3 0.2 36	80.227	171.2	0.46	2 5 +0.6 3 0.4 60
80.254	291.2	0.26	2 7 +0.2 3 36				
				80.226	170.5	0.46	2n 0.4 60-Inch
80.250	289.3	0.26	3n 0.2 36-Inch				
9060	STT 273		13 56.3 +05 18				
80.449	110.5	0.92	2 5 0.0 3 0.4 26		RST 670		13 57.9 -49 05
82.313	111.4	1.06	2 5 0.0 3 0.0 26	80.254	128.1	0.17	2 8 +0.7 3 0.0 36
82.327	110.7	1.03	2 4 -0.2 3 0.5 26				
				80.254	128.1	0.17	1n 0.0 36-Inch
81.696	110.9	1.00	3n 0.3 26-Inch				

119

FIN 218							13 58.0 -62 57							HEI 65							14 02.8 +14 17						
80.224	316.8	3.19	2 5	+0.9	3 1.8	60	85.354	114.2	0.47	2 6	-0.2	3 0.5	26	86.422	120.9	0.43	2 7	0.0	3 0.5	26	86.449	116.3	0.51	2 6	0.0	3 0.5	26
80.227	317.0	3.03	2 5	+0.5	3 1.8	60																					
80.226	316.9	3.11	2n	1.8	60-Inch		86.075	117.1	0.47	3n	0.5	26-Inch															
9073	A 2167		13 58.4 +02 14				BU 1197							14 03.0 -31 41													
79.425	144.6	0.20	3 6	-0.2	3	26								80.240	217.3	2.32	2 8	+0.6	3 1.4	36							
79.466	148.3	0.18	1 6	0.0	3 0.0	26								80.243	216.0	2.25	2 7	+1.0	3 1.4	36							
86.422	134.6	0.19	2 6	0.0	3	26								80.246	218.0	2.23	4 5	+0.5	3 1.3	36							
86.449	132.4	0.17	2 6	0.0	3	26																					
86.463	132.5	0.20	2 6	-0.1	3	26								80.243	217.1	2.27	3n	1.4	36-Inch								
79.446	146.4	0.19	2n	0.0	26-Inch																						
86.445	133.2	0.19	3n		26-Inch																						
Valbousquet, 1981: -9.0, +0.04; +0.9, +0.05.							9091	HWE 29		14 03.4 +05 57																	
							76.342	240.6	1.20	2 7	0.0	3 0.3	26	76.405	238.6	1.25	2 6	-0.2	3 0.0	26							
9078	STF 1794		13 59.8 +19 53				77.133	241.6	1.18	2 7	0.0	3 0.2	26	76.627	240.3	1.21	3n	0.2	26-Inch								
86.460	128.2	1.99	2 5	-0.1	3 0.2	26																					
86.463	125.6	1.93	2 6	0.0	3 0.0	26																					
86.468	126.8	2.00	2 5	-0.2	3 0.1	26																					
86.482	127.2	1.98	2 6	0.0	3 0.2	26																					
86.468	127.0	1.98	4n	0.1	26-Inch									COO 164		14 03.7 -46 18											
							80.246	138.4	2.88	2 4	+0.4	3 0.4	36	80.249	138.8	2.86	2 8	+0.3	3 0.4	36							
9080	A 687		14 00.2 +28 26				80.251	137.8	2.84	2 6	+0.6	3 0.2	35	80.249	138.3	2.86	3n	0.3	36-Inch								
78.398	309.3	1.04	2 5	-0.2	3 0.1	26								9094	BU 1270		14 03.8 +08 29										
79.425	309.4	1.19	2 6	-0.1	3 0.1	26								77.133	2.5	0.23	1 7	+0.1	3 0.0	26							
79.466	309.0	1.14	2 5	+0.1	3 0.1	26								77.423	2.9	0.23	1 5	+0.1	3 0.0	26							
79.096	309.2	1.12	3n	0.1	26-Inch									77.472	357.9	0.21	1 6	0.0	3 0.0	26							
														80.405	22.2	0.17	2 5	+0.1	3	26							
9084	A 569		14 01.2 +25 22				80.446	22.1	0.18	1 4	-0.3	4 0.0	26	80.449	18.7	0.16	1 5	-0.2	3 0.0	26							
76.405	132.7	0.59	2 7	-0.1	3 0.6	26								77.343	1.1	0.22	3n	0.0	26-Inch								
77.423	132.6	0.56	2 5	0.0	3 0.5	26								80.433	21.0	0.17	3n	0.0	26-Inch								
78.398	131.8	0.49	2 5	0.0	3 0.6	26								Heintz, 1973: -2.5, -0.02; -1.3, -0.03.													
77.409	132.4	0.55	3n	0.6	26-Inch																						
9089	A 1097		14 02.0 +57 13				9106	BU 938		14 06.3 -26 35																	
76.405	214.8	0.31	1 6	0.0	3 0.3	26								80.232	317.8	0.16	2 6	+0.6	3	60							
77.133	220.7	0.33	1 8	-0.1	3 0.2	26								83.170	313.9	0.22	2 6	+0.3	2 0.2	60							
77.404	218.2	0.30	2 5	0.0	3 0.3	26								83.173	311.9	0.21	2 6	+0.1	2	60							
80.405	220.5	0.33	1 5	0.0	3 0.6	26								83.184	316.8	0.21	2 7	+0.2	2	60							
80.446	219.1	0.34	2 4	-0.5	4 0.2	26																					
80.449	225.0	0.33	2 4	-0.5	3 0.3	26								80.232	317.8	0.16	1n		60-Inch								
82.340	227.7	0.35	2 6	0.0	4 0.2	26								83.176	314.2	0.21	3n	0.2	60-Inch								
82.346	225.6	0.36	2 5	-0.3	3 0.2	26																					
82.360	226.5	0.34	2 5	-0.1	3 0.3	26																					
86.427	226.8	0.39	2 7	-0.2	3 0.2	26																					
86.449	227.2	0.36	2 6	-0.2	3 0.4	26																					
86.460	226.0	0.43	2 6	-0.2	3 0.2	26																					
86.463	230.6	0.36	2 5	-0.2	3	26																					
76.981	217.9	0.31	3n	0.3	26-Inch									SLR 19		14 07.7 -49 53											
80.433	221.5	0.33	3n	0.4	26-Inch		80.227	304.8	1.38	2 5	+0.6	3 0.2	60	80.230	306.2	1.40	2 6	+1.2	3 0.2	60							
82.349	226.6	0.35	3n	0.2	26-Inch		80.228	305.5	1.39	2n	0.2	60-Inch															
86.450	227.6	0.38	4n	0.2	26-Inch		Erceg and Olevic, 1985: -2.6, +0.01.																				
Janova, 1960: +1.1, -0.07; -0.2, -0.06; +2.2, -0.04; -2.3, -0.01.																											

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

9119	A 2065			14 08.4 +16 44			9174	STF 1816			14 13.9 +29 06							
80.449	338.5	1.62	1 5	0.0	3 1.0	26	86.460	91.0	0.67	2 5	0.0	3 0.3 26						
82.313	343.6	1.64	2 6	-0.1	3 1.5	26	86.463	91.1	0.72	2 5	-0.1	3 0.0 26						
82.346	338.4	1.71	2 6	-0.1	3 1.2	26	86.468	89.6	0.68	2 6	-0.2	3 0.0 26						
81.703	340.2	1.66	3n	1.2	26-Inch		86.464	90.6	0.69	3n	0.1	26-Inch						
Closing in with little angular change.																		
9127	STT 275			14 09.2 +07 24			9170	BU 939			14 14.1 -08 31							
86.460	354.1	5.08	1 5	-0.1	3 3.2	26	76.342	73.3	0.28	2 6	0.0	3 0.1 26						
86.463	352.5	4.90	1 5	-0.1	3 3.2	26	76.405	72.2	0.27	2 6	0.0	3 0.1 26						
86.468	354.1	4.98	1 5	-0.3	3 3.2	26	77.423	72.6	0.30	2 6	0.0	3 0.3 26						
86.482	354.1	4.80	1 6	0.0	3 3.3	26	80.240	69.4	0.36	2 8	+0.6	3 0.2 36						
86.468	353.7	4.94	4n	3.3	26-Inch		80.246	69.0	0.37	2 5	+0.5	3 0.2 36						
9159	STT 278			14 12.2 +44 11			80.251	69.0	0.36	2 6	-0.1	3 0.0 36						
82.313	135.6	0.30	2 6	0.0	3 0.0	26	82.346	74.8	0.41	2 4	-0.2	3 26						
82.340	137.6	0.30	2 6	0.0	4 0.4	26	76.723	72.7	0.28	3n	0.1	26-Inch						
82.346	138.6	0.28	2 5	-0.3	3 26		80.246	69.1	0.36	3n	0.1	36-Inch						
82.360	134.4	0.29	2 5	-0.1	3 26		82.346	74.8	0.41	1n	26-Inch							
85.354	131.6	0.33	2 5	-0.2	3 26		9177	STF 1817			14 14.2 +26 42							
86.422	128.0	0.28	2 6	-0.1	3 26		86.468	354.8	0.51	2 5	-0.2	3 0.6 26						
86.427	129.6	0.35	2 6	-0.1	3 26		86.482	350.8	0.51	2 6	0.0	3 0.3 26						
86.449	126.8	0.29	2 6	0.0	3 0.0	26	86.504	351.3	0.46	2 6	+0.3	3 0.4 26						
82.340	136.6	0.29	4n	0.2	26-Inch		86.485	352.3	0.49	3n	0.4	26-Inch						
86.163	129.0	0.31	4n	0.0	26-Inch		9182	STF 1819			14 15.4 +03 08							
Heintz, 1976: +2.4, +0.01; +2.6, +0.05. Quadrant reversed.																		
9158	STT 277			14 12.5 +28 43			76.342	251.3	0.82	2 7	0.0	3 0.3 26						
85.354	40.6	0.33	2 6	-0.3	3 26		76.405	250.6	0.83	2 5	0.0	3 0.1 26						
86.422	36.1	0.28	2 6	0.0	3 0.2	26	77.133	250.9	0.81	2 7	0.0	3 0.2 26						
86.427	38.0	0.34	2 5	0.0	3 26		77.404	251.6	0.87	2 4	+0.2	3 0.2 26						
86.449	44.3	0.28	2 7	-0.1	3 0.0	26	78.469	247.6	0.84	2 7	-0.1	3 0.1 26						
86.163	39.8	0.31	4n	0.1	26-Inch		78.491	248.0	0.78	2 6	+0.3	3 0.3 26						
9156	SEE 202			14 12.9 -30 00			78.510	247.2	0.78	2 6	+0.9	3 0.3 26						
80.232	116.6	1.16	2 5	+0.6	3 0.3	60	82.346	239.6	0.80	2 5	-0.1	3 0.1 26						
80.232	116.6	1.16	1n	0.3	60-Inch		82.360	240.0	0.79	2 5	0.0	3 0.3 26						
9167	STF 1820			14 13.1 +55 20			86.468	226.6	0.82	2 5	-0.1	3 0.1 26						
82.313	111.6	2.58	2 6	+0.1	3 0.3	26	86.482	227.7	0.86	2 6	+0.1	3 0.4 26						
82.327	111.7	2.62	2 4	0.0	3 0.3	26	86.504	229.8	0.86	2 6	+0.2	3 0.2 26						
82.340	112.8	2.46	2 7	-0.1	4 0.4	26	76.821	251.1	0.83	4n	0.2	26-Inch						
82.327	112.8	2.55	3n	0.3	26-Inch		78.490	247.6	0.80	3n	0.2	26-Inch						
Hopmann, 1964: +0.9, +0.28.													82.353	239.8	0.80	2n	0.2	26-Inch
	FIN 220			14 13.7 -58 44			86.485	228.0	0.85	3n	0.2	26-Inch						
80.227	38.8	0.63	1 4	+0.6	3 0.3	60	Houser, 1987: +1.3, -0.05; +1.4, -0.08; +2.0, -0.07; -0.9, -0.03.											
80.230	39.8	0.66	1 6	+1.2	3 0.5	60	9185	A 1101			14 15.8 +10 18							
80.228	39.3	0.64	2n	0.4	60-Inch		76.342	240.0	0.21	2 7	0.0	3 0.5 26						
Slow angular decrease.													76.405	239.2	0.25	2 6	0.0	3 0.4 26
							80.405	226.1	0.30	2 5	0.0	3 0.5 26						
							80.449	232.5	0.27	2 5	-0.1	3 0.6 26						
							76.374	239.6	0.23	2n	0.4	26-Inch						
							80.427	229.3	0.28	2n	0.6	26-Inch						
							Baize, 1953: -3.3, -0.01; -1.8, 0.00. Baize, 1983 (1): +1.0, -0.03; +0.4, -0.02. (2): -3.6, +0.01; -1.9, 0.00.											

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

121

9194	A 1616	14 16.0 +52 47	9215	STF 1832	14 18.8 +03 53
80.449	91.8	1.57 2 5 0.0 3 0.5 26	82.346	147.3	0.40 2 5 +0.1 3 0.2 26
82.313	92.3	1.52 2 5 +0.1 3 0.3 26	85.354	150.2	0.37 2 5 -0.2 3 26
82.340	93.6	1.53 2 7 -0.1 4 0.3 26	83.850	148.8	0.38 2n 0.2 26-Inch
81.701	92.6	1.54 3n 0.2 26-Inch	9229	STF 1834	14 20.3 +48 31
9186	HU 138	14 16.0 -07 04	82.327	102.5	1.41 2 4 0.0 3 26
80.240	356.8	0.38 2 8 +0.5 3 0.2 36	82.340	103.5	1.30 2 5 0.0 4 0.2 26
80.246	358.2	0.32 2 +0.6 3 36	82.346	103.4	1.31 2 5 -0.1 3 0.2 26
80.251	356.8	0.37 1 5 +0.1 3 0.0 36	82.338	102.5	1.34 3n 0.2 26-Inch
83.170	1.4	0.33 1 5 +0.3 2 0.6 60	van den Bos, 1936: -1.4, +0.09.		
83.173	357.7	0.32 2 5 +0.1 2 0.5 60	9230	ES 19	14 20.5 +51 41
83.184	355.7	0.36 2 5 +0.1 2 60	82.346	49.8	1.77 2 6 0.0 3 1.4 26
86.422	355.9	0.42 1 6 0.0 3 0.0 26	85.354	50.6	1.44 2 5 -0.3 3 1.2 26
86.449	359.7	0.53 1 5 0.0 3 0.5 26	83.850	50.2	1.60 2n 1.3 26-Inch
86.463	2.6	0.44 1 5 -0.1 3 0.3 26	COO 168 CD 14 20.9 -42 26		
80.246	357.3	0.36 3n 0.2 36-Inch	80.251	203.7	1.63 2 6 +0.4 3 0.1 36
83.176	358.3	0.34 3n 0.6 60-Inch	80.254	202.7	1.75 2 7 +0.4 3 0.2 36
86.445	359.4	0.44 3n 0.3 26-Inch	80.252	203.2	1.69 2n 0.2 36-Inch
Eggen, 1967: -4.0, -0.03; 6.9, -0.07; -9.8, +0.01.			9232	HU 902	14 22.0 -18 48
Baize, 1983: +5.6, -0.05; +2.9, -0.09; +0.2, 0.00.			83.170	241.9	1.36 2 6 +0.4 3 1.5 60
9195	HU 1266	14 16.5 +33 32	83.173	240.3	1.29 2 5 +0.1 3 1.2 60
77.133	153.2	0.24 2 7 0.0 3 0.0 26	83.172	241.1	1.32 2n 1.4 60-Inch
77.423	156.9	0.18 3 6 +0.1 3 0.0 26	R 244 14 22.6 -48 19		
77.278	155.0	0.21 2n 0.0 26-Inch	80.251	122.0	4.61 2 7 +0.4 3 2.8 36
Baize, 1958: -13.7, -0.01.			80.254	123.5	4.60 2 7 +0.5 3 3.5 36
9200	HU 139	14 17.2 -11 39	80.252	122.8	4.60 2n 3.2 36-Inch
83.170	321.6	0.17 2 5 +0.4 2 60	9245	A 1104	14 23.1 +07 30
83.184	322.6	0.18 2 5 +0.2 2 60	86.422	259.2	0.51 2 6 0.0 3 0.1 26
83.177	322.1	0.18 2n 60-Inch	86.449	258.6	0.56 2 6 0.0 3 0.3 26
9211	BU 1272	14 17.8 +48 45	86.460	264.1	0.66 2 5 -0.1 3 26
80.449	134.6	1.38 2 4 0.0 4 1.2 26	86.463	257.1	0.63 2 5 -0.1 3 0.2 26
82.313	136.3	1.32 2 5 +0.1 4 1.0 26	86.448	259.8	0.59 4n 0.2 26-Inch
82.327	135.2	1.42 2 4 0.0 3 0.8 26	FIN 221 14 23.2 -63 02		
81.696	135.4	1.37 3n 1.0 26-Inch	80.224	251.9	3.00 2 5 +0.7 3 2.0 60
9217	BU 1273	14 18.5 +47 55	80.227	252.4	2.99 2 4 +0.6 3 2.5 60
78.469	183.7	1.32 2 7 -0.1 3 1.2 26	80.226	252.2	3.00 2n 2.2 60-Inch
79.466	182.1	1.21 2 5 -0.1 3 1.2 26	This is the only measure since discovery.		
80.405	182.4	1.12 2 4 0.0 3 1.0 26			
79.447	182.7	1.22 3n 1.1 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

9249	A 149		14 23.3 +47 36	9283	BU 462		14 30.0 -03 44
80.405	133.5	0.72	2 5 0.0 3 0.3 26	76.342	142.5	2.10	2 7 0.0 3 0.1 26
80.449	131.2	0.67	2 4 0.0 3 0.2 26	76.405	142.5	2.10	2 6 0.0 3 0.0 26
82.313	131.8	0.68	2 5 +0.1 3 0.2 26	77.404	142.8	2.20	1 4 0.0 3 0.2 26
				77.423	143.1	2.15	3 6 0.0 3 0.1 26
81.056	132.2	0.69	3n 0.2 26-Inch	76.894	142.7	2.14	4n 0.1 26-Inch
9247	BU 1111 BC		14 23.4 +08 27				
76.342	2.8	0.22	1 6 0.0 3 0.2 26				
76.405	4.8	0.23	1 6 0.0 3 0.4 26		RST 4529		14 31.1 -05 49
77.423	9.8	0.23	1 6 0.0 3 0.3 26				
79.425	19.4	0.26	1 7 0.0 3 0.2 26	83.170	152.3	0.29	2 6 +0.4 2 0.0 60
79.466	23.9	0.27	1 6 +0.1 3 0.2 26	83.173	152.4	0.30	2 4 +0.2 2 60
79.488	23.4	0.29	1 5 +0.3 3 0.3 26	83.184	149.9	0.22	2 6 +0.1 2 0.4 60
86.422	54.2	0.29	2 6 0.0 3 26				
86.427	59.6	0.25	2 6 -0.1 3 0.3 26	83.176	151.5	0.27	3n 0.2 60-Inch
86.449	57.8	0.23	2 6 -0.1 3 26				
86.460	54.4	0.24	2 5 0.0 3 26		Heintz, 1981 (1): -8.7, -0.01.		
					(2): -6.8, -0.02.		
76.723	5.8	0.23	3n 0.3 26-Inch		Quadrant reversed.		
79.460	22.2	0.27	3n 0.2 26-Inch				
86.440	56.5	0.25	4n 0.3 26-Inch				
Couteau, 1958:	-4.0, -0.04;		-0.9, -0.01;	9290	I 1246		14 31.4 -25 20
	-2.1, +0.01.						
9256	STN 31		14 25 2 -28 08	80.240	22.6	0.40	2 8 +0.5 3 0.3 36
				80.243	26.6	0.49	2 7 +0.6 3 0.3 36
80.232	270.5	0.64	2 5 +0.6 3 0.4 60				
80.251	273.0	0.60	2 5 +0.1 3 0.4 36	80.242	24.6	0.44	2n 0.3 36-Inch
83.173	269.4	0.48	2 4 +0.2 2 0.5 60				
83.184	267.2	0.66	2 7 +0.2 2 0.8 60				
80.232	270.5	0.64	1n 0.4 60-Inch				
80.251	273.0	0.60	1n 0.4 36-Inch				
83.178	268.3	0.57	2n 0.6 60-Inch				
	RST 704		14 26.3 -49 46	9301	A 570		14 32.3 +26 41
80.251	154.5	2.20	2 6 +0.5 3 1.7 36	77.133	66.3	0.22	2 7 -0.1 3 0.3 26
80.254	154.9	2.18	2 7 +0.5 3 2.2 36	77.423	63.0	0.16	2 6 +0.1 3 0.0 26
				78.491	45.6	0.21	2 6 0.0 3 0.2 26
80.252	154.7	2.19	2n 2.0 36-Inch	78.510	44.2	0.22	2 7 +0.5 3 0.3 26
				78.512	38.8	0.19	2 6 +0.3 3 0.3 26
				78.516	37.1	0.22	2 7 +0.3 3 0.3 26
9264	A 2069		14 26.7 +16 25	77.278	64.6	0.19	2n 0.1 26-Inch
86.468	254.9	0.19	2 5 -0.2 3 0.2 26	78.507	41.4	0.21	4n 0.3 26-Inch
86.482	263.7	0.22	2 6 0.0 3 0.0 26				
86.504	258.4	0.20	2 5 +0.3 3 26				
86.485	259.0	0.20	3n 0.1 26-Inch				
Couteau, 1986:	+7.9, +0.01.			9297	HU 140		14 32.5 -13 01
	I 1243 AB		14 27.7 -41 13	80.246	192.7	1.28	2 4 +0.4 3 0.5 36
80.251	330.2	0.27	2 5 +0.6 3 0.0 36	80.251	193.6	1.24	2 6 -0.2 3 0.6 36
80.254	321.8	0.22	2 7 +0.6 3 0.0 36				
				80.248	193.2	1.26	2n 0.6 36-Inch
80.252	326.0	0.24	2n 0.0 36-Inch				
	COO 171 ABXC			9315	STF 1860		14 33.9 +55 14
80.251	142.2	3.80	2 5 +0.7 3 0.2 36	82.327	109.7	0.95	2 4 0.0 3 1.0 26
80.254	143.4	3.69	2 7 +0.7 3 0.5 36	82.340	110.2	1.18	2 5 -0.2 4 0.5 26
				82.346	110.3	1.13	2 6 -0.2 3 1.2 26
80.252	142.9	3.74	2n 0.4 36-Inch	82.338	110.1	1.09	3n 0.9 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

123

9309	A 2589	14 34.0 -05 07	9329	STF 1863	14 38.0 +51 35
76.342	208.1 0.88	1 6 +0.1 3 0.3 26	79.425	71.8 0.63	2 7 0.0 3 0.3 26
76.405	207.5 0.96	1 6 0.0 3 0.3 26	79.466	71.1 0.68	2 5 -0.1 3 0.2 26
78.491	213.2 0.89	2 5 +0.1 3 0.2 26	79.488	72.4 0.66	2 5 0.0 3 0.2 26
77.079	209.6 0.91	3n 0.3 26-Inch	79.460	71.8 0.66	3n 0.2 26-Inch
	KUI 68	14 34.1 +32 33	9328	BU 226	14 38.9 22 20
86.422	322.4 26.14	2 6 -0.1 3 4.0 26	80.232	111.7 0.91	2 5 +0.5 3 0.2 60
86.427	322.0 25.88	2 5 -0.2 3 4.2 26	83.172	112.3 0.61	2 4 +0.2 2 60
86.460	322.0 26.08	2 5 -0.1 3 4.0 26	83.184	111.9 0.88	2 6 +0.1 2 0.2 60
86.436	322.1 26.03	3n 4.0 26-Inch	82.196	112.0 0.80	3n 0.2 60-Inch
Optical.			9340	STF 1867	14 40.8 +31 17
9317	HU 574	14 35.4 +19 16	86.468	3.5 0.82	2 5 -0.3 3 0.3 26
86.422	105.3 0.19	2 7 0.0 3 26	86.482	4.0 0.82	2 6 0.0 3 0.4 26
86.463	111.8 0.24	2 6 -0.2 3 26	86.504	2.5 0.95	2 5 +0.2 3 0.2 26
86.482	108.8 0.20	2 6 -0.1 3 26	86.485	3.3 0.86	3n 0.3 26-Inch
86.456	108.6 0.21	3n 26-Inch		RST 2917	14 41.1 -22 37
	HJ 4687	14 35.6 -36 33	80.240	187.6 0.36	2 8 +0.5 3 0.7 36
80.249	118.7 0.86	2 7 +0.2 3 0.2 36	80.243	192.8 0.34	2 7 +0.6 3 0.5 36
80.251	118.6 0.87	2 5 +0.6 3 0.2 36	80.249	194.2 0.39	3 7 +0.2 3 1.0 36
80.254	120.0 0.86	2 7 +0.6 3 0.3 36	80.244	191.5 0.36	3n 0.7 36-Inch
80.251	119.1 0.86	3n 0.2 36-Inch		FIN 225	14 41.1 -53 35
This pair needs attention as it closes in.			80.224	116.0 2.05	2 4 +0.6 3 0.4 60
			80.227	117.9 2.00	2 4 +0.6 3 0.4 60
9318	BU 941	14 35.8 +00 15	80.226	117.0 2.02	2n 0.4 60-Inch
79.466	165.5 0.26	1 5 0.0 3 0.0 26	9343	STF 1865	14 41.2 +13 43
82.313	161.3 0.28	2 5 0.0 3 26	86.468	302.7 1.01	2 5 -0.2 3 0.2 26
82.346	157.5 0.30	2 5 -0.1 3 26	86.482	306.6 1.02	2 5 -0.1 3 0.3 26
81.375	161.4 0.28	3n 0.0 26-Inch	86.504	304.2 0.99	2 7 -0.3 3 0.3 26
	FIN 223	14 36.7 -54 14	86.537	304.9 1.03	2 4 +0.3 3 0.2 26
80.227	74.4 2.53	2 5 +0.5 3 2.0 60	86.498	304.6 1.01	4n 0.2 26-Inch
80.230	75.2 2.49	2 5 +1.0 3 2.0 60	Wierzbinski, 1956: -0.9, 0.00.		
80.228	74.8 2.51	2n 2.0 60-Inch	9350	STF 1871	14 41.4 +51 24
The only measure since discovery.			86.468	308.7 1.88	2 5 -0.2 3 26
			86.482	306.6 1.84	2 7 -0.1 3 0.1 26
9324	A 347	14 36.9 +48 13	86.504	306.9 1.87	2 5 0.0 3 0.2 26
79.425	277.7 0.49	2 7 0.0 3 0.3 26	86.485	308.1 1.86	3n 0.2 26-Inch
79.466	274.9 0.47	2 5 -0.2 3 0.3 26		HU 1510	14 41.7 -44 15
79.488	276.7 0.52	2 5 -0.1 3 0.4 26	80.251	144.7 0.47	2 6 +0.6 3 0.3 36
79.460	276.4 0.49	3n 0.3 26-Inch	80.254	146.4 0.54	2 6 +0.3 3 0.2 36
Baize, 1987: -0.5, -0.07.			80.252	145.6 0.50	2n 0.2 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

9345	STF 1866	14 41.8 +09 31		9392	STF 1883	14 48.9 +05 57
77.133	22.4 0.78	1 7 -0.1 3 0.1 26		76.405	305.0 0.20	2 6 0.0 3 0.0 26
77.472	24.0 0.62	2 4 0.0 3 0.0 26		77.423	306.4 0.25	2 6 0.0 3 0.0 26
78.491	22.8 0.77	2 5 +0.2 3 0.2 26		78.491	300.1 0.26	2 5 +0.1 3 0.0 26
78.512	20.8 0.75	1 7 +0.3 3 0.2 26		78.510	298.4 0.26	2 7 +0.3 3 0.2 26
77.902	22.5 0.73	4n 0.1 26-Inch		77.707	302.5 0.24	4n 0.0 26-Inch
				Feierman, 1969: 0.0, -0.07.		
9352	HU 575	14 42.6 +19 29		9404	HU 647	14 49.2 +48 14
77.133	6.0 0.53	1 7 0.0 3 0.3 26		80.449	83.9 0.32	2 5 -0.3 3 0.2 26
77.423	4.8 0.56	1 6 0.0 3 0.2 26		82.313	78.8 0.27	2 5 0.0 3 26
77.472	4.8 0.46	1 5 0.0 3 0.0 26		82.346	92.6 0.22	2 6 0.0 3 26
78.491	3.7 0.47	1 5 +0.2 3 0.3 26		81.703	85.1 0.27	3n 0.2 26-Inch
78.510	1.2 0.51	1 7 +0.4 3 0.2 26				
78.512	0.4 0.57	1 6 +0.4 3 0.3 26		9396	BU 106	14 49.3 -14 09
78.516	0.7 0.53	1 7 +0.3 3 0.2 26		76.405	358.5 1.98	1 6 0.0 3 1.0 26
79.425	357.7 0.63	1 6 0.0 3 0.3 26		76.492	359.4 1.65	1 5 +0.2 3 1.0 26
79.466	356.5 0.54	1 6 0.0 3 0.3 26		77.423	358.6 1.88	1 5 +0.2 3 0.6 26
79.488	356.2 0.54	1 5 +0.1 3 0.3 26		76.773	358.8 1.84	3n 0.9 26-Inch
80.449	354.1 0.54	2 5 -0.2 3 0.4 26				
82.313	345.6 0.49	2 5 0.0 3 0.3 26		9400	A 1110	14 49.7 +07 59
82.346	349.4 0.41	2 5 0.0 3 0.3 26		79.425	252.9 0.70	2 6 0.0 3 0.5 26
86.422	317.6 0.39	2 6 0.0 3 0.2 26		79.466	250.7 0.55	2 5 -0.1 3 0.4 26
86.449	305.7 0.38	2 5 +0.1 3 0.3 26		79.488	255.2 0.56	2 5 0.0 3 0.3 26
86.463	309.5 0.35	2 6 -0.2 3 26		82.313	250.2 0.60	2 5 0.0 3 0.3 26
				82.327	255.5 0.59	2 4 -0.1 3 26
77.343	5.2 0.52	3n 0.2 26-Inch		82.346	252.1 0.53	2 6 0.0 3 0.2 26
78.507	1.5 0.52	4n 0.2 26-Inch		79.460	252.9 0.60	3n 0.4 26-Inch
79.460	356.8 0.57	3n 0.3 26-Inch		82.329	252.6 0.57	3n 0.2 26-Inch
81.703	349.7 0.48	3n 0.3 26-Inch				
86.445	310.9 0.37	3n 0.2 26-Inch		9418	STT 287	14 51.4 +44 55
Muller, 1952:	-4.1, -0.05; -3.0, -0.06;			86.460	169.4 0.98	2 5 -0.2 3 0.4 26
	-3.8, -0.01; -1.2, -0.07;			86.463	169.2 1.03	2 6 -0.1 3 26
	-9.3, -0.01.			86.468	169.0 0.94	2 5 -0.2 3 26
Starikova, 1976:	+1.4, -0.04; +2.7, -0.05;			86.482	170.8 1.00	2 6 0.0 3 0.1 26
	+2.1, 0.00; +5.2, -0.05;			86.468	169.6 0.99	4n 0.2 26-Inch
	-1.6, -0.01.			Heintz, 1962: +2.1, -0.09.		
9359	B 276	14 44.4 -27 01				
80.240	211.6 0.43	2 8 +0.6 3 0.7 36			RST 3898	14 51.5 -10 33
80.243	208.8 0.41	2 7 +0.6 3 0.2 36		80.240	262.7 0.52	2 8 +0.7 3 1.2 36
80.254	203.8 0.34	2 5 +0.8 3 0.4 36		80.243	254.9 0.58	2 7 +0.8 3 1.2 36
80.246	208.1 0.39	3n 0.4 36-Inch		80.242	258.6 0.60	2n 1.2 36-Inch
				Considerable motion. Neglected.		
	FIN 309	14 46.2 -21 10		I 236		14 53.2 -73 12
80.232	190.0 0.15	2 6 +0.5 3 0.0 60		80.224	120.4 2.12	2 5 +0.5 3 2.0 60
80.240	180.0 0.16	2 8 +0.6 3 0.0 36		80.227	121.2 2.21	2 5 +0.5 3 2.2 60
80.249	187.0 0.17	2 7 +0.3 3 0.0 36		80.226	120.8 2.16	2n 2.1 60-Inch
80.232	190.0 0.15	1n 0.0 60-Inch				
80.244	183.5 0.16	2n 0.0 36-Inch				
da Silva, Balca, 1972:	-1.7, -0.03;					
	-8.5, -0.02.					
9387	BU 346	14 48.6 -17 20				
80.254	272.0 2.38	2 5 +0.8 3 0.2 36				
80.254	272.0 2.38	1n 0.2 36-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

125

9425	STT 288	14 53.4 +15 42	9482	A 1629	15 01.2 +41 33
82.327	172.4	1.37 2 4 -0.1 3 0.7 26	76.405	208.4	1.93 2 6 -0.1 3 3.2 26
85.526	170.8	1.38 1 7 0.0 3 0.7 26	79.466	279.4	1.97 2 5 -0.1 3 3.2 26
85.543	170.2	1.36 1 7 +0.3 3 0.6 26	82.346	282.3	1.88 2 6 0.0 3 2.2 26
84.465	171.1	1.37 3n 0.7 26-Inch	79.406	280.7	1.93 3n 2.9 26-Inch
Heintz, 1956: +1.9, +0.21.			9494	STF 1909	15 03.8 +47 39
	HJ 4707	14 54.3 -66 25	77.133	25.2	0.74 1 8 -0.2 3 0.2 26
80.224	325.6	0.59 2 4 +0.6 3 60	77.423	25.4	0.81 1 7 0.0 3 0.3 26
80.227	328.0	0.56 2 4 +0.6 3 0.3 60	77.472	27.0	0.92 1 4 -0.2 3 0.6 26
80.226	326.8	0.58 2n 0.3 60-Inch	78.491	30.9	0.94 2 6 0.0 3 0.6 26
Woolley, Mason, 1948: -6.1, -0.05.			78.510	32.2	0.93 2 6 +0.2 3 0.4 26
	COU 409 Aa	14 54.8 +24 11	78.512	30.1	0.89 2 7 0.0 3 0.3 26
86.422	212.2	0.46 2 6 -0.1 3 0.3 26	78.516	30.2	0.86 2 7 0.0 3 0.4 26
86.449	215.0	0.49 2 5 0.0 3 0.3 26	79.425	34.5	0.97 2 7 0.0 3 0.3 26
86.463	215.7	0.47 2 6 -0.3 3 0.3 26	79.466	33.5	0.98 2 6 -0.1 3 0.3 26
86.445	214.3	0.47 3n 0.3 26-Inch	79.488	33.3	0.80 2 4 -0.1 3 26
9441	A 1627	14 55.7 +39 39	80.405	34.3	1.16 2 4 -0.6 3 0.3 26
79.425	60.7	0.15 2 6 0.0 3 0.0 26	80.449	36.7	0.93 2 6 -0.3 3 0.7 26
80.449	56.4	0.18 2 5 -0.1 3 0.0 26	82.313	38.9	1.25 2 5 -0.1 3 0.5 26
82.340	61.1	0.17 2 5 -0.2 4 0.0 26	82.327	42.0	1.15 2 4 -0.5 3 0.3 26
80.738	59.4	0.17 3n 0.0 26-Inch	82.340	39.7	1.15 2 6 -0.2 4 0.6 26
Couteau, 1984: + 4.9, +0.02.			82.346	39.5	1.19 2 6 0.0 3 0.5 26
9452	BU 808	14 58.4 -08 42	85.526	46.3	1.45 2 7 -0.2 3 0.8 26
80.232	103.2	0.34 2 5 +0.6 3 0.0 60	85.543	45.6	1.36 2 7 0.0 3 0.5 26
80.232	103.2	0.34 1n 0.0 60-Inch	85.546	46.0	1.32 2 6 -0.2 3 0.6 26
More than a quadrant has been described.			86.460	46.4	1.52 2 5 -0.3 3 0.3 26
	OL 187	14 58.6 +15 08	86.463	46.2	1.45 2 7 -0.1 3 0.6 26
86.422	81.4	1.72 2 6 0.0 3 0.3 26	86.468	46.0	1.44 2 5 -0.3 3 0.3 26
86.449	82.0	1.79 2 6 0.0 3 0.1 26	86.482	44.8	1.50 2 6 -0.1 3 0.5 26
86.482	80.4	1.66 2 6 0.0 3 0.2 26	86.504	44.3	1.47 2 5 0.0 3 0.6 26
86.451	81.3	1.72 3n 0.2 26-Inch	77.343	25.9	0.82 3n 26-Inch
9453	BU 239	14 58.6 -27 39	78.507	30.8	0.90 4n 26-Inch
80.249	347.5	0.60 2 7 +0.2 3 0.2 36	79.460	33.8	0.92 3n 26-Inch
80.251	348.9	0.56 2 5 +0.3 3 36	80.427	35.5	1.04 2n 26-Inch
80.250	348.2	0.58 2n 0.2 36-Inch	82.332	40.0	1.18 4n 26-Inch
van Dessel, 1983: -4.2, +0.06.			85.538	46.0	1.38 3n 26-Inch
			86.475	45.5	1.48 5n 26-Inch
			Heintz, 1978: +1.1, +0.06; +1.6, +0.06; +1.8, +0.02; +1.1, +0.07; +1.7, +0.07; +3.1, +0.03; +1.5, +0.14.		
			RST 3906	15 04.3 -15 29	
			80.232	331.6	0.22 2 6 +0.4 3 0.3 60
			80.240	332.0	0.26 2 8 +0.6 3 36
			80.243	331.4	0.26 2 7 +0.4 3 0.0 36
			80.251	332.9	0.20 2 6 +0.4 3 0.0 36
			80.232	331.6	0.22 1n 0.3 60-Inch
			80.245	332.1	0.24 3n 0.0 36-Inch
			Heintz, 1981: -0.4, -0.05; +0.2, -0.03.		
			9497	BU 119	15 05.5 -07 01
			78.526	283.0	2.00 2 5 +0.1 3 0.4 26
			78.529	283.8	1.99 2 7 +0.1 3 0.8 26
			78.551	282.7	1.99 2 6 +0.7 3 0.6 26
			78.535	283.2	1.99 3n 0.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

	RST 4534		15 08.9 -06 10		9552	BU 350		15 15.7 -27 36
80.232	10.2	0.27	1 6 +0.7 3 0.2 60		80.251	132.9	0.52	2 5 +0.6 3 0.8 36
80.240	10.6	0.27	2 8 +0.6 3 0.2 36		80.254	132.1	0.52	2 5 +0.4 3 0.3 36
80.243	11.4	0.29	1 8 +0.4 3 0.2 36					
80.251	10.5	0.30	1 6 +0.3 3 0.0 36		80.252	132.5	0.52	2n 0.6 36-Inch
80.232	10.2	0.27	1n 0.2 60-Inch		9575	ES 1252		15 17.8 +46 11
80.245	10.8	0.29	3n 0.1 36-Inch					
					76.405	16.0	1.68	1 6 -0.1 3 0.3 26
					78.491	20.0	1.49	2 5 -0.1 3 0.7 26
	WRH 4		15 10.4 +15 26		78.512	20.7	1.51	2 7 0.0 3 0.3 26
86.422	293.8	3.74	2 6 0.0 3 1.2 26		77.803	18.9	1.56	3n 0.4 26-Inch
86.449	294.0	3.54	2 6 0.0 3 1.0 26					
86.482	295.5	3.95	2 6 0.0 3 1.4 26		9578	STF 1932 APXB		15 18.3 +26 50
86.451	294.4	3.74	3n 1.2 26-Inch					
					77.423	250.5	1.24	2 6 +0.1 3 0.1 26
9545	HU 1159		15 12.7 +60 08		77.472	249.5	1.26	2 5 -0.2 3 0.3 26
79.425	320.9	0.21	2 7 -0.2 3 0.0 26		77.535	250.5	1.24	2 8 +0.1 3 0.1 26
79.466	309.1	0.23	2 5 -0.1 3 26		80.449	251.4	1.23	2 6 -0.3 3 0.1 26
82.346	328.1	0.18	2 6 0.0 3 26		82.313	253.9	1.38	2 5 -0.2 3 0.3 26
					82.327	252.8	1.46	2 4 -0.5 3 0.0 26
80.412	319.4	0.21	3n 0.0 26-Inch		82.340	253.2	1.43	2 6 -0.3 4 0.0 26
					86.504	255.1	1.34	2 5 -0.1 3 0.4 26
Costa, Docobo, 1984: -9.8, +0.04.					86.556	255.0	1.40	2 7 +0.3 3 0.3 26
Baize, 1985: -6.1, +0.02.					87.552	256.9	1.35	2 7 +0.2 3 0.2 26
					87.555	255.7	1.39	2 7 +0.2 3 0.2 26
					77.477	250.2	1.25	3n 0.2 26-Inch
					81.857	252.8	1.38	4n 0.1 26-Inch
					87.042	255.7	1.37	4n 0.3 26-Inch
9551	HU 145		15 14.1 +52 36		Heintz, 1965: +1.3, -0.10; +1.5, -0.04.			
					+1.9, -0.11.			
79.425	130.9	2.21	2 7 -0.1 3 2.6 26					
79.466	134.2	2.09	2 5 -0.1 3 3.0 26		I 1267			15 18.6 -46 12
82.313	133.1	2.47	2 5 -0.2 3 2.8 26					
					80.227	31.9	0.45	1 5 +0.6 3 0.5 60
80.401	132.7	2.26	3n 2.8 26-Inch		80.230	33.0	0.44	2 6 +0.6 3 0.6 60
					80.232	33.8	0.47	2 6 +0.7 3 0.8 60
	B 1274		15 14.2 -38 29		80.230	32.9	0.45	3n 0.6 60-Inch
80.224	63.8	0.62	2 4 +0.5 3 0.4 60					
80.227	63.4	0.68	2 5 +0.5 3 0.6 60		9589	A 1630		15 19.2 +43 29
80.226	63.6	0.65	2n 0.5 60-Inch					
					78.516	254.0	0.70	2 7 -0.2 3 0.4 26
					78.526	248.7	0.67	2 5 0.0 3 0.5 26
					78.529	252.9	0.70	2 7 +0.2 3 0.3 26
9553	STF 1926		15 15.0 +38 18		78.524	251.9	0.69	3n 0.4 26-Inch
85.526	246.6	0.45	2 6 -0.2 3 1.0 26					
85.543	245.6	0.43	2 6 0.0 3 0.8 26		9591	A 1631 AB		15 20.0 +46 03
86.422	251.9	0.52	2 5 0.0 3 1.5 26					
86.449	249.6	0.40	1 6 0.0 3 1.5 26		77.423	266.1	0.76	2 6 0.0 3 0.3 26
					78.510	267.1	0.76	2 6 0.0 3 0.6 26
85.985	248.4	0.45	4n 1.2 26-Inch		78.512	264.4	0.70	2 7 0.0 3 0.4 26
					78.148	265.9	0.74	3n 0.4 26-Inch
9561	HJ 2772		15 15.7 +44 51					
					ES 75 AC			
86.460	316.0	9.03	2 5 -0.2 3 3.5 26					
86.463	314.2	9.03	2 5 -0.1 3 4.0 26		77.423	35.5	4.40	2 7 +0.1 3 0.1 26
86.482	316.2	8.80	2 6 0.0 3 3.0 26		78.510	33.3	4.24	2 5 +0.1 3 0.3 26
					78.512	35.0	4.28	2 7 +0.1 3 0.3 26
86.468	315.5	8.95	3n 3.5 26-Inch					
					78.148	34.6	4.31	3n 0.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

127

9599	HO 62		15 20.8 +34 59	87.552	19.9	0.87	2 7 +0.1 3 0.5 26	
80.449	282.4	1.40	2 6 -0.4 3 0.0 26	87.555	18.3	0.91	2 8 0.0 3 0.4 26	
82.313	286.5	1.41	2 5 0.0 3 0.0 26	87.558	19.1	1.04	2 7 0.0 3 0.3 26	
82.340	285.8	1.44	2 6 -0.3 4 0.0 26	87.572	18.4	0.93	2 6 +0.3 3 0.4 26	
81.701	284.9	1.42	3n 0.0 26-Inch	76.448	240.1	0.40	2n 0.4 26-Inch	
9600	HU 146		15 21.0 +21 04	77.477	259.4	0.37	3n 0.3 26-Inch	
	79.425	129.2	0.56	2 6 0.0 3 0.3 26	78.507	283.9	0.33	4n 0.3 26-Inch
	79.466	129.2	0.57	2 5 -0.1 3 0.2 26	79.446	305.1	0.36	2n 0.4 26-Inch
	79.488	127.0	0.49	2 4 0.0 3 0.2 26	80.449	327.4	0.39	1n 0.6 26-Inch
	80.449	127.5	0.55	2 7 -0.3 3 0.6 26	82.332	352.7	0.58	4n 0.5 26-Inch
	79.707	128.2	0.54	4n 0.3 26-Inch	85.286	10.7	0.80	4n 0.4 26-Inch
		I 86		15 21.5 -38 16	86.448	14.8	1.00	4n 0.4 26-Inch
	80.224	253.2	1.85	2 5 +0.5 3 0.5 60	87.559	18.9	0.94	4n 0.4 26-Inch
	80.227	253.2	1.79	2 5 +0.7 3 0.7 60	Silbernagel, 1929: +2.2, -0.08; +2.9, -0.04; +2.4, -0.04; -0.7, -0.02; +0.4, -0.05; +1.4, -0.04; +0.8, -0.08; 0.0, +0.05; +0.1, -0.07.			
	80.226	253.2	1.82	2n 0.6 60-Inch	9619	A 1367		15 23.3 +36 19
	HJ 2777		15 22.4 +25 38	80.449	325.7	0.51	2 5 -0.2 3 0.2 26	
76.405	342.8	41.86	1 7 0.0 3 3.5 26	82.313	330.0	0.63	2 5 -0.1 3 0.2 26	
77.472	342.8	41.92	1 5 -0.3 3 4.0 26	82.340	324.4	0.62	2 6 -0.2 4 0.0 26	
76.938	342.8	41.89	2n 3.8 26-Inch	82.346	337.0	0.58	2 5 0.0 3 26	
Optical.				81.862	329.3	0.58	4n 0.1 26-Inch	
9623	HU 909		15 23.2 +61 00	9626	STF 1938 BC		15 24.5 +37 22	
79.425	286.2	1.47	2 6 -0.2 3 2.8 26	77.472	18.0	2.16	2 5 -0.2 3 0.3 26	
80.449	282.7	1.48	2 6 -0.1 3 2.4 26	78.510	14.4	1.98	2 6 0.0 3 0.8 26	
85.526	284.7	1.46	2 6 -0.1 3 2.0 26	78.512	15.2	2.01	2 7 +0.1 3 0.6 26	
81.800	284.5	1.47	3n 2.4 26-Inch	78.516	17.6	2.05	2 7 -0.1 3 0.4 26	
9617	STF 1937		15 23.2 +30 18	84.530	15.4	2.18	2 7 -0.1 3 0.2 26	
	76.405	240.0	0.35	3 6 0.0 3 0.4 26	85.543	14.0	2.09	2 7 0.0 3 0.6 26
	76.492	240.2	0.44	2 5 -0.2 3 0.3 26	85.546	15.7	2.11	2 6 -0.1 3 0.3 26
	77.423	259.0	0.38	2 5 +0.1 3 0.4 26	78.252	16.3	2.05	4n 0.5 26-Inch
	77.472	260.3	0.39	3 5 -0.4 3 0.3 26	85.206	15.0	2.13	3n 0.4 26-Inch
	77.535	258.9	0.33	2 8 +0.1 3 0.3 26	Baize, 1952: -0.1, -0.11; +1.1, -0.08. Scardia, 1986: 0.0, -0.08; +1.2, -0.04.			
	78.491	282.7	0.31	2 5 +0.2 3 0.3 26	9628	HU 149		15 24.6 +54 13
	78.510	284.0	0.31	2 6 +0.1 3 0.4 26	85.526	274.5	0.65	2 6 -0.2 3 0.2 26
	78.512	283.4	0.35	2 6 +0.1 3 0.3 26	85.543	275.3	0.53	2 6 0.0 3 0.1 26
	78.516	285.6	0.34	2 7 0.0 3 0.3 26	85.546	277.5	0.57	2 6 0.0 3 0.2 26
79.425	305.9	0.36	2 7 -0.1 3 0.3 26	85.538	275.9	0.58	3n 0.2 26-Inch	
79.466	304.3	0.35	2 5 -0.1 3 0.4 26		B 1288		15 24.6 -48 35	
80.449	327.4	0.39	2 6 -0.2 3 0.6 26	80.230	323.8	0.24	2 6 +0.4 3 0.1 60	
82.313	353.4	0.69	2 5 0.0 3 0.5 26	80.232	318.8	0.20	2 6 +0.5 3 0.0 60	
82.327	354.1	0.58	2 4 -0.3 3 0.6 26	80.231	321.3	0.22	2n 0.0 60-Inch	
82.340	351.6	0.50	1 6 -0.2 4 0.4 26					
82.346	351.8	0.57	2 5 +0.1 3 0.5 26					
84.530	7.5	0.80	2 7 0.0 3 0.3 26					
85.526	11.8	0.83	2 5 -0.3 3 0.4 26					
85.543	12.0	0.77	2 7 0.0 3 0.4 26					
85.546	11.4	0.80	2 6 -0.3 3 0.4 26					
86.422	14.3	1.02	2 5 0.0 3 26					
86.449	14.1	1.00	2 6 0.0 3 0.3 26					
86.460	15.2	0.97	2 5 -0.2 3 0.5 26					
86.463	15.8	1.02	2 6 -0.2 3 0.5 26					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

129

79.780	213.4	0.65	3n	0.2	26-Inch	9769	STF 1989	15 39.7 +79 58
82.332	223.8	0.53	4n	0.2	26-Inch			
85.544	248.7	0.34	4n	0.2	26-Inch	79.429	30.6	0.62 2 6 0.0 3 0.0 26
86.448	259.6	0.34	4n	0.0	26-Inch	79.466	33.9	0.55 1 5 +0.2 3 0.8 26
87.555	277.4	0.29	3n	0.3	26-Inch	80.449	30.8	0.60 1 6 0.0 3 0.8 26
Couteau, 1966: +1.1, -0.09; +2.9, -0.06; +8.1, -0.07; +9.7, -0.02. +12.6, -0.02.						79.780	31.8	0.59 3n 0.5 26-Inch
Following the approaching periastron passage, a very good orbit should result.						Wierzbinski, 1957: +1.3, -0.12. Giannuzzi, 1956: +4.8, -0.01.		
RST 4545 15 36.9 -04 38						9739	AG 197	15 39.8 +21 17
80.240	268.0	0.34	2 8	+0.4 3	0.6 36	86.482	128.5	2.94 2 6 0.0 3 0.3 26
80.243	272.2	0.33	2 7	+0.2 3	0.8 36	86.504	126.0	3.04 2 5 0.0 3 0.4 26
80.246	268.8	0.31	2 5	+0.3 3	0.3 36	86.493	127.2	2.99 2n 0.4 26-Inch
80.243	269.7	0.33	3n	0.6	36-Inch	9735	BU 122	15 39.9 -19 47
9730	HU 1168	15 37.0 +64 26	80.246	43.4	1.78	2 5	+0.3 3	0.2 36
79.425	127.9	0.20	2 6	0.0 3	0.0 26	80.251	43.3	1.91 2 5 +0.7 3 0.1 36
79.466	145.4	0.26	2 5	0.0 3	26	80.248	43.4	1.84 2n 0.2 36-Inch
80.449	142.3	0.20	2 6	-0.1 3	26	9742	A 2076	15 40.5 +18 41
82.340	135.0	0.24	2 6	-0.2 4	26	82.313	179.5	0.61 2 5 0.0 3 0.2 26
82.346	128.6	0.17	2 6	-0.1 3	26	82.340	183.9	0.55 2 6 -0.1 4 0.1 26
80.805	135.8	0.21	5n	0.0	26-Inch	82.346	181.4	0.57 2 7 +0.1 3 0.2 26
Heintz, 1976: -4.3, -0.01.						82.333	181.6	0.58 3n 0.1 26-Inch
9729	MLB 72	15 37.1 +60 21	9756	STF 1969	15 41.3 +59 59	79.425	16.8	0.40 1 7 0.0 3 0.6 26
82.346	6.1	2.01	2 6	0.0 3	0.2 26	79.466	18.2	0.36 1 5 +0.1 3 0.4 26
85.526	2.5	1.75	2 6	-0.2 3	0.3 26	80.449	19.2	0.39 2 5 0.0 3 26
85.543	3.7	1.92	2 6	0.0 3	0.5 26	85.526	26.5	0.59 2 6 0.0 3 0.4 26
84.472	4.1	1.89	3n	0.3	26-Inch	85.543	23.6	0.59 2 6 +0.1 3 0.4 26
I 242 15 37.4 -31 32						85.546	22.9	0.51 2 7 0.0 3 0.5 26
80.224	43.0	2.17	2 4	+0.7 3	0.3 60	79.780	18.1	0.38 3n 0.5 26-Inch
80.227	42.4	2.11	2 5	+0.5 3	0.3 60	85.538	24.3	0.56 3n 0.4 26-Inch
80.226	42.7	2.14	2n	0.3	60-Inch	Heintz, 1975: +1.1, -0.01; +3.2, +0.04.		
I 243 15 37.9 -31 15						9757	STF 1967	15 42.8 +26 18
80.224	335.6	0.80	2 5	+0.8 3	0.5 60	78.510	124.1	0.30 2 6 +0.2 3 1.3 26
80.227	337.3	0.87	2 5	+0.6 3	0.6 60	78.512	127.1	0.28 2 6 +0.2 3 1.2 26
80.226	336.4	0.84	2n	0.6	60-Inch	78.516	128.0	0.39 2 6 0.0 3 2.0 26
9733	BU 121	15 39.6 -27 39	78.526	124.1	0.28	2 5	0.0 3	1.4 26
80.246	102.2	1.81	2 6	+0.4 3	0.0 36	87.572	121.3	0.52 2 6 0.0 3 2.0 26
80.251	102.6	1.81	2 5	+0.8 3	0.1 36	87.575	122.7	0.47 2 6 +0.2 3 2.0 26
80.248	102.4	1.81	2n	0.0	36-Inch	87.591	121.6	0.56 2 6 +0.3 3 1.8 26
						78.516	125.8	0.31 4n 1.5 26-Inch
						87.579	121.9	0.52 3n 1.9 26-Inch
						Baize, 1953: -2.0, -0.05; +3.0, -0.07.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

9751	BU 35		15 42.8 -16 00	9783	A 2077		15 46.9 +19 04
80.240	106.5	2.07	2 8 +0.3 3 1.3 36	77.535	237.1	0.45	2 7 +0.1 3 0.8 26
80.243	106.2	1.98	2 7 +0.2 3 2.5 36	78.512	239.9	0.51	2 5 +0.2 3 0.4 26
80.251	106.5	2.12	2 6 +0.8 3 1.3 36	78.516	231.4	0.51	2 5 +0.1 3 0.7 26
80.245	106.4	2.06	3n 1.7 36-Inch	78.188	236.1	0.49	3n 0.6 26-Inch
9759	A 19		15 43.7 -05 42		I 245		15 46.9 -44 15
78.526	337.0	1.58	1 5 +0.1 3 0.1 26				
78.529	335.9	1.61	2 5 0.0 3 0.1 26	80.240	335.4	0.82	2 7 +0.4 3 0.8 36
78.551	337.5	1.64	2 6 +0.1 3 0.1 26	80.243	332.0	0.66	2 7 +0.4 3 0.7 36
78.535	336.8	1.61	3n 0.1 26-Inch	80.251	338.0	0.83	2 4 +0.5 3 1.2 36
	COU 106		15 44.0 +22 20	80.245	335.5	0.77	3n 0.9 36-Inch
85.526	275.1	0.39	2 6 -0.1 3 0.5 26		COU 801		15 48.8 +32 41
85.543	274.5	0.40	2 6 +0.1 3 0.4 26	86.422	195.1	1.42	2 6 0.0 3 0.3 26
85.546	275.5	0.39	2 6 0.0 3 0.5 26	86.449	197.8	1.50	2 6 -0.2 3 0.6 26
85.538	275.0	0.39	3n 0.5 26-Inch	86.460	199.8	1.34	2 5 -0.1 3 0.3 26
9763	A 2230		15 44.0 +02 31	86.444	197.6	1.42	3n 0.4 26-Inch
70.409	47.7	4.65	2 8 0.0 1 6.0 26	9800	STF 3126		15 50.0 -03 11
75.451	48.0	4.24	2 6 +0.1 3 5.0 26	86.482	281.7	2.17	2 5 0.0 3 0.0 26
77.535	44.8	4.39	2 7 0.0 3 5.0 26	86.504	282.3	2.30	2 4 -0.1 3 26
74.465	46.8	4.43	3n 5.3 26-Inch	86.493	282.0	2.24	2n 0.0 26-Inch
	I 1099		15 44.3 -54 19	9831	A 2080		15 54.1 +16 59
80.246	14.2	0.35	2 7 +0.4 3 0.0 36	78.529	80.0	0.24	2 7 +0.2 3 0.2 26
80.251	16.4	0.43	1 5 +0.5 3 0.2 36	78.551	82.5	0.24	2 7 +0.1 3 0.2 26
80.248	15.3	0.39	2n 0.1 36-Inch	79.425	88.1	0.22	2 6 0.0 3 0.0 26
	FIN 234		15 45.2 -58 41	80.449	83.9	0.24	2 6 0.0 3 0.0 26
80.240	163.8	0.24	2 7 +0.6 3 0.2 36	82.313	89.3	0.27	2 6 -0.1 3 0.0 26
80.243	163.4	0.23	2 7 +0.3 3 0.2 36	82.340	91.0	0.21	2 5 -0.2 4 26
80.246	162.7	0.25	2 5 +0.6 3 36	82.346	89.2	0.28	2 7 -0.1 3 0.1 26
80.243	163.3	0.24	3n 0.2 36-Inch	85.526	91.1	0.29	2 6 0.0 3 0.0 26
This is the only measure since discovery.				85.543	85.8	0.36	2 5 0.0 3 0.0 26
Decrease in angle and separation.				85.546	94.9	0.28	2 6 -0.2 3 0.3 26
9775	BU 620		15 46.2 -28 04	78.835	83.5	0.23	3n 0.1 26-Inch
80.230	173.4	0.53	2 6 +0.4 3 0.0 60	81.862	88.4	0.25	4n 0.0 26-Inch
80.232	170.6	0.59	2 6 +0.5 3 0.2 60	85.538	90.6	0.31	3n 0.1 26-Inch
80.231	172.0	0.56	2n 0.1 60-Inch	Baize, 1986: -4.3, -0.06; -2.8, -0.04; -4.7, +0.02.			
	COU 66		15 46.5 +19 57	9844	HO 399		15 55.4 +29 32
85.526	146.0	0.79	2 6 0.0 3 0.0 26	86.449	119.5	3.33	2 5 -0.2 3 3.4 26
85.543	146.8	0.88	2 6 +0.1 3 26	86.460	117.6	3.53	2 5 -0.1 3 3.4 26
85.546	147.0	0.76	2 7 +0.1 3 0.0 26	86.463	117.8	3.38	2 7 -0.2 3 3.0 26
85.538	146.6	0.81	3n 0.0 26-Inch	86.457	118.3	3.41	3n 3.1 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

131

9836	I 977	15 55.7 -26 45	9909	STF 1998	16 04.4 -11 22
80.227	146.6	0.31 2 5 +0.5 3 0.3 60	78.510	19.3	1.11 1 5 0.0 3 0.2 26
80.230	145.3	0.26 2 5 +0.3 3 0.4 60	78.512	18.8	1.04 1 4 +0.2 3 0.3 26
80.232	144.7	0.32 2 6 +0.4 3 0.4 60	78.516	18.6	1.09 1 4 0.0 3 0.4 26
80.230	145.5	0.30 3n 0.1 60-Inch	78.526	18.0	1.15 1 5 -0.2 3 0.3 26
Heintz, 1982: +0.1, 0.00.			82.313	28.3	1.11 2 5 0.0 3 0.2 26
9842	STF 1985	15 55.9 -02 12	82.346	29.2	1.18 2 4 0.0 3 26
84.530	349.1	5.95 1 6 -0.1 3 1.2 26	84.530	33.2	1.02 2 6 0.0 3 0.3 26
85.546	347.7	5.98 2 7 +0.1 3 0.7 26	84.565	30.5	1.03 1 6 +0.1 3 0.4 26
85.587	349.0	6.00 1 6 +0.4 3 1.3 26	86.422	34.0	0.96 2 6 -0.1 3 0.0 26
85.221	348.6	5.98 3n 1.1 26-Inch	86.449	37.5	0.92 2 5 -0.2 3 0.2 26
Hopmann, 1973: -1.9, -0.17. The "orbit" depends on an arc-length of only 22 degrees.			86.463	35.8	0.97 2 7 -0.1 3 0.2 26
9891	STF 2006	16 00.3 +58 56	86.482	35.8	0.91 2 6 -0.2 3 0.2 26
86.460	182.0	1.65 2 5 0.0 3 1.2 26	87.555	36.2	0.80 2 6 0.0 3 0.3 26
86.463	180.5	1.59 1 7 -0.3 3 1.2 26	87.558	38.9	0.83 2 6 -0.1 3 0.3 26
86.504	183.7	1.48 2 5 0.0 3 1.2 26	87.572	37.9	0.87 2 5 +0.1 3 0.4 26
86.476	182.1	1.57 3n 1.2 26-Inch	87.575	36.0	0.91 2 7 0.0 3 0.2 26
9880	STT 303	16 00.9 +13 16	Harrington, 1987: -0.2, -0.06; +2.3, +0.06; +0.1, +0.08; -2.2, +0.06.		
84.530	169.4	2 7 -0.1 3 0.5 26	9918	BU 948 APXB	16 05.7 -06 17
84.565	168.3	1.42 1 7 0.0 3 0.4 26	80.449	109.1	1.08 2 6 0.0 3 2.6 26
85.543	166.0	1.36 2 5 0.0 3 0.0 26	81.579	113.1	1.05 2 7 +0.1 3 2.2 26
85.546	169.0	1.30 2 7 -0.2 3 0.3 26	82.313	111.2	1.15 2 5 0.0 3 2.5 26
85.559	166.9	1.45 1 5 -0.2 3 0.5 26	81.447	111.1	1.09 3n 2.4 26-Inch
85.149	167.9	1.38 4n 0.3 26-Inch	KUI 70 16 06.0 -06 09		
9881	BU 623	16 01.3 -06 58	84.530	64.9	9.30 2 6 +0.2 3 6.0 26
80.449	229.6	0.83 2 6 0.0 3 0.6 26	85.526	64.1	9.00 2 5 0.0 3 5.0 26
82.313	232.5	0.87 2 5 -0.1 3 0.4 26	85.546	64.3	9.43 2 6 0.0 3 5.0 26
82.346	232.5	0.88 2 4 -0.1 3 0.6 26	85.201	64.4	9.24 3n 5.3 26-Inch
81.703	231.5	0.86 3n 0.5 26-Inch	9925	BU 812	16 07.1 +16 54
9907	STF 2004	16 03.3 +28 51	82.346	104.6	0.77 2 5 -0.1 3 0.3 26
76.405	278.6	1.79 2 7 0.0 3 0.7 26	85.526	103.1	0.71 2 6 0.0 3 0.2 26
77.535	279.5	1.90 2 7 -0.1 3 0.7 26	85.543	103.1	0.57 2 5 0.0 3 0.4 26
78.512	280.4	1.83 2 5 0.0 3 0.7 26	84.472	103.6	0.68 3n 0.3 26-Inch
77.484	279.5	1.84 3n 0.7 26-Inch	9930	STF 2011	16 07.6 +29 00
SEE 258 16 03.6 -57 47			86.460	67.9	2.68 2 5 0.0 3 2.0 26
80.240	250.1	0.51 2 7 +0.4 3 0.0 36	86.482	67.3	2.44 2 6 -0.1 3 1.5 26
80.243	248.2	0.41 2 7 +0.2 3 0.2 36	86.504	67.0	2.44 2 5 -0.1 3 2.2 26
80.246	247.0	0.40 2 6 +0.4 3 0.2 36	86.482	67.4	2.52 3n 1.9 26-Inch
80.243	248.4	0.44 3n 0.1 36-Inch	FIN 242 16 07.6 -53 36		
van den Bos, 1961: +1.5, -0.08.			80.240	38.2	0.27 2 7 +0.5 3 0.0 36
			80.246	39.1	0.24 2 6 +0.4 3 36
			80.243	38.6	0.26 2n 0.0 36-Inch
			This is the only measure since discovery. Increase in angle.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

9931	A 1798	16 07.9 +14 25		9988	A 2180 BC	16 16.9 +01 17
76.405	39.2 0.14	2 7 0.0 4 26		80.449	311.4 1.34	2 6 -0.1 3 0.8 26
77.535	38.8 0.22	3 7 0.0 3 26		81.579	308.2 1.35	2 6 +0.2 3 0.3 26
77.574	34.2 0.15	2 5 0.0 4 26		82.313	311.9 1.18	2 5 0.0 3 0.7 26
77.171	37.4 0.17	3n 26-Inch		81.447	310.5 1.29	3n 0.6 26-Inch
9932	BU 949	16 08.5 -10 06		9989	A 2181	16 16.9 +01 11
78.510	189.1 0.30	1 5 0.0 3 0.3 26		80.449	48.1 0.33	2 7 -0.1 3 0.0 26
78.526	185.1 0.24	1 5 -0.1 3 0.2 26		81.579	56.0 0.44	2 5 +0.1 3 0.2 26
78.529	187.5 0.29	1 6 -0.2 3 0.4 26		82.313	51.3 0.37	2 5 0.0 3 0.0 26
78.551	192.0 0.32	1 7 0.0 3 0.3 26		81.447	51.8 0.38	3n 0.1 26-Inch
80.224	190.7 0.34	2 5 +0.6 3 0.4 60		Popovic, 1969: -11.8, +0.03.		
80.227	192.8 0.38	2 6 +0.4 3 0.0 60			I 987	16 17.0 -53 42
80.232	192.8 0.35	2 5 +0.3 3 0.2 60		80.240	147.2 0.27	2 7 +0.5 3 1.2 36
82.313	193.7 0.37	2 5 0.0 3 26		80.240	147.2 0.27	1n 1.2 36-Inch
85.526	195.3 0.41	1 5 -0.1 3 26		This measure does not agree with either the Knipe or the Heintz orbit. Another pair?		
85.546	187.8 0.40	1 7 0.0 3 0.3 26		9994	HU 661	16 17.8 +49 17
85.587	195.7 0.38	1 6 0.0 3 0.4 26		76.262	222.8 0.68	2 5 0.0 3 0.2 26
85.589	192.7 0.39	1 7 +0.1 3 0.5 26		76.405	218.5 0.79	2 6 0.0 4 0.1 26
86.463	195.1 0.49	1 7 -0.2 3 0.3 26		77.535	225.8 0.71	2 7 0.0 3 0.2 26
86.482	192.6 0.38	1 5 -0.2 3 26		78.510	226.0 0.62	2 6 -0.1 3 0.0 26
87.555	193.3 0.34	1 7 0.0 3 0.0 26		77.178	223.3 0.70	4n 0.1 26-Inch
87.558	195.8 0.45	1 7 0.0 3 0.5 26		9991	A 23	16 17.9 -07 24
78.529	188.4 0.29	4n 0.3 26-Inch		80.449	72.4 1.83	2 6 0.0 3 0.3 26
80.228	192.1 0.36	3n 0.2 60-Inch		81.579	73.2 1.88	2 6 +0.1 3 0.1 26
85.562	192.9 0.40	4n 0.4 26-Inch		82.313	74.1 1.96	2 5 +0.1 3 0.3 26
87.014	194.2 0.42	4n 0.3 26-Inch		81.447	73.2 1.89	3n 0.2 26-Inch
Wilson, 1940: -2.7, -0.08; +0.2, -0.04; -1.0, -0.08; +0.6, -0.06.				10011	A 1137	16 19.2 +57 36
	I 557	16 09.5 -31 03		82.346	191.2 0.39	2 6 0.0 3 1.2 26
80.230	226.2 0.19	2 6 +0.2 3 0.3 60		85.526	194.0 0.46	2 6 0.0 3 0.8 26
80.232	224.6 0.20	2 5 +0.4 3 60		83.936	192.6 0.42	2n 1.0 26-Inch
80.231	225.4 0.20	2n 0.3 60-Inch		Considerable inconsistency in recent measures of this pair.		
Closing in.				10006	STT 309	16 19.2 +41 40
9955	A 2179	16 12.1 -00 06		82.346	284.5 0.32	2 6 -0.1 3 0.4 26
77.535	79.8 0.84	2 7 0.0 3 2.2 26		85.526	285.7 0.29	2 7 0.0 3 0.0 26
78.516	84.2 0.73	2 4 0.0 3 2.4 26		85.543	287.7 0.34	2 5 -0.1 3 26
78.526	83.6 0.84	4 5 0.0 3 2.2 26		84.472	286.0 0.32	3n 0.2 26-Inch
78.529	78.8 0.83	2 6 -0.2 3 2.8 26				
78.276	81.6 0.81	4n 2.4 26-Inch				
9970	STF 2028	16 12.9 +39 21				
77.535	Too close	2 7 0.0 3 26				
9977	A 2083	16 14.7 +16 01				
86.422	153.1 1.13	2 6 -0.2 3 0.0 26				
86.449	151.9 1.07	2 6 -0.2 3 0.0 26				
86.460	148.2 1.02	2 4 0.0 3 26				
86.444	151.1 1.08	3n 0.0 26-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

133

10007	A 225	16 19.8 +26 47	10046	BU 950	16 25.3 -09 52
86.449	110.3	0.18 2 6 -0.2 3 26	80.449	346.4	1.14 1 6 -0.1 3 2.5 26
86.463	107.0	0.19 2 7 -0.2 3 26	81.579	346.7	1.24 1 6 +0.2 3 0.7 26
			82.313	346.5	1.14 1 5 +0.1 3 1.2 26
86.456	108.6	0.18 2n 26-Inch	81.447	346.5	1.17 3n 1.5 26-Inch
10017	HU 481	16 21.3 +23 00		COO 197	16 25.4 -49 09
86.463	112.4	0.30 1 7 -0.2 3 1.2 26	80.243	114.9	1.93 2 7 0.0 3 0.2 36
86.482	111.8	0.28 3 7 -0.2 3 1.0 26	80.246	115.2	1.93 2 6 +0.2 3 0.0 36
86.472	112.1	0.29 2n 1.1 26-Inch	80.244	115.0	1.93 2n 0.1 36-Inch
Kovic, 1969: -13.6, -0.07. Speckle con-			Mourao, 1976: +7.0, +0.27.		
firms this result nicely; therefore, the					
orbit fails.					
10043	ES 1827	16 23.2 +60 17	10050	I 94	16 25.8 -29 55
76.342	37.4	4.76 2 6 -0.9 3 3.0 26	80.230	194.6	0.85 2 5 +0.1 3 1.0 60
78.512	45.1	5.51 2 5 0.0 3 2.7 26	80.232	195.2	0.78 2 5 +0.2 3 1.0 60
78.529	47.0	5.23 2 7 0.0 3 3.5 26	80.231	194.9	0.82 2n 1.0 60-Inch
78.551	39.0	4.97 2 7 -0.2 3 3.5 26	10070	STF 2049	16 27.9 +25 59
77.984	42.1	5.12 4n 3.2 26-Inch	86.460	197.9	1.15 2 4 -0.2 3 0.9 26
			86.463	196.0	1.31 4 7 -0.1 3 0.8 26
			86.482	197.5	1.18 2 7 -0.2 3 0.6 26
			86.556	199.0	1.13 2 7 -0.1 3 0.7 26
10036	VBS AB	16 23.6 +33 21	86.490	197.6	1.19 4n 0.8 26-Inch
78.529	82.0	0.16 2 7 -0.2 3 0.4 26	10080	COP	16 28.2 +60 41
78.551	80.4	0.20 2 6 +0.1 3 0.2 26	76.262	86.7	1.32 2 5 0.0 3 0.6 26
79.425	84.8	0.19 2 7 0.0 3 26	76.405	84.7	1.40 2 6 0.0 4 0.5 26
78.835	82.4	0.18 3n 0.3 26-Inch	76.472	90.9	1.69 2 4 -0.2 3 0.5 26
			77.535	88.0	1.35 2 6 0.0 3 0.6 26
	BU 951 ABXC		76.734	86.5	1.36 4n 0.6 26-Inch
78.529	34.0	1.06 2 7 -0.1 3 0.7 26	10075	STF 2052	16 28.9 +18 24
78.551	38.5	0.98 2 7 +0.2 3 1.2 26	77.574	139.4	1.36 2 5 -0.2 4 0.1 26
79.425	35.1	1.16 2 7 +0.1 3 0.8 26	77.593	138.4	1.31 2 7 0.0 3 0.0 26
78.835	35.9	1.07 3n 0.9 26-Inch	77.631	138.8	1.26 2 7 +1.0 3 0.0 26
10056	ES 1828	16 23.9 +60 20	79.425	136.1	1.37 2 7 0.0 3 0.1 26
76.405	246.3	3.89 3 6 0.0 4 2.5 26	79.466	136.3	1.52 2 4 -0.2 3 0.1 26
77.535	248.1	3.99 2 7 0.0 3 2.0 26	80.449	133.8	1.42 2 7 0.0 3 0.0 26
78.512	246.2	3.80 2 5 0.0 3 1.0 26	82.346	131.7	1.43 2 7 0.0 3 0.0 26
77.484	246.9	3.89 3n 1.8 26-Inch	84.530	132.9	1.53 2 7 0.0 3 0.0 26
10039	A 25	16 24.0 +20 24	84.565	132.5	1.53 2 5 0.0 3 0.0 26
84.530	113.1	2 6 0.0 3 2.5 26	87.555	129.6	1.63 2 6 -0.1 3 0.0 26
84.565	113.9	5.18 2 5 0.0 3 2.6 26	87.558	127.7	1.61 2 7 -0.3 3 0.0 26
85.543	112.6	5.00 2 5 -0.1 3 4.0 26	87.572	130.6	1.74 2 5 -0.3 3 0.0 26
85.587	113.9	5.18 2 5 +0.2 3 2.6 26	87.575	130.7	1.61 2 7 -0.3 3 0.0 26
85.056	113.4	5.12 3n 2.9 26-Inch	77.599	138.9	1.31 3n 0.0 26-Inch
			79.780	135.4	1.44 3n 0.1 26-Inch
			83.813	132.4	1.50 3n 0.0 26-Inch
			87.565	130.2	1.65 4n 0.0 26-Inch
			Siegrist, 1952: +1.5, -0.04; -0.3, +0.02;		
			-0.5, -0.03; +0.3, +0.01.		
			The later orbit by Scardia gives much		
			worse residuals.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

10078	A 2084	16 29.5 +16 36
80.449	146.0 0.47	1 6 0.0 3 0.4 26
81.579	138.5 0.47	2 7 0.0 3 26
85.526	141.1 0.43	2 6 0.0 3 0.0 26
82.518	141.9 0.46	3n 0.2 26-Inch

10085	HU 1173	16 30.0 +33 53
79.425	29.6 0.17	2 7 0.0 3 26
79.425	29.6 0.17	1n 26-Inch

Couteau, 1983: +5.7, +0.07.
 baize, 1985: -5.7, +0.06.

10087	STF 2055	16 30.9 +01 59
77.574	9.4 1.30	1 5 -0.2 4 1.6 26
77.593	7.8 1.10	1 7 -0.2 3 1.0 26
78.491	8.9 1.50	1 4 -0.2 3 1.8 26
78.510	9.6 1.13	1 6 0.0 3 1.7 26
80.618	12.7 1.20	1 7 +0.3 3 1.5 26
80.651	11.4 1.30	1 7 +0.7 3 1.5 26
80.654	11.7 1.23	1 8 +0.7 3 1.4 26
80.657	11.9 1.28	1 6 +0.7 3 1.0 26
84.530	15.4	1 7 +0.1 3 1.2 26
84.565	15.6 1.20	1 6 0.0 3 2.0 26
85.526	16.4 1.38	1 7 0.0 3 2.0 26
85.543	16.8 1.36	4 5 0.0 3 1.2 26
85.559	15.8 1.35	1 5 -0.3 3 1.0 26
87.555	16.2 1.12	1 6 0.0 3 1.4 26
87.558	19.7 1.25	2 7 -0.2 3 1.2 26
87.572	18.3 1.29	1 5 -0.2 3 1.0 26
87.575	18.6 1.34	4 7 -0.3 3 1.2 26
78.042	8.9 1.26	4n 1.5 26-Inch
80.645	11.9 1.25	4n 1.3 26-Inch
85.145	16.0 1.32	4n 1.5 26-Inch
87.565	18.2 1.25	4n 1.2 26-Inch

Finzi, Giannuzzi, 1955: -1.7, -0.05;
 -1.5, -0.10;
 -1.7, -0.09;
 -1.7, -0.19.

Predicted separation is too large.

10103	A 1138	16 31.1 +57 56
77.535	168.0 0.47	1 6 0.0 3 1.3 26
78.529	158.8 0.47	1 6 0.0 3 1.0 26
78.551	166.8 0.54	1 7 0.0 3 1.2 26
78.205	164.5 0.49	3n 1.2 26-Inch

10094	STF 2056	16 31.6 +05 26
85.543	313.8 6.67	2 5 0.0 3 1.0 26
85.559	312.6 6.77	2 5 -0.2 3 1.2 26
85.587	314.4 6.70	2 0 -0.2 3 1.2 26
85.563	313.6 6.71	3n 1.1 26-Inch

FIN 248			16 31.7 -55 04		
80.246	227.9	0.26	2 6	+0.2 3	0.0 36
80.251	235.2	0.24	2 7	+0.6 3	0.3 36
80.248	231.6	0.25	2n	0.2	36-Inch

10095	A 693	16 31.8 -02 16
80.251	320.5 0.12	2 6 +0.1 3 36
80.251	320.5 0.12	1n 36-Inch

The 1963 orbit by Heintz does not represent recent observed motion in this pair.

10092	STF 3105	16 31.8 -07 03
79.425	206.1 0.26	1 7 +0.1 3 0.2 26
80.449	204.4 0.33	2 7 0.0 3 0.0 26
80.654	205.2 0.28	1 8 +0.7 3 0.4 26
80.657	207.2 0.26	1 6 +0.8 3 0.4 26
85.589	198.1 0.34	1 6 -0.2 3 0.4 26
86.422	197.5 0.28	1 5 +0.1 3 26
86.449	197.5 0.31	1 5 -0.2 3 26
86.463	197.0 0.36	1 5 -0.1 3 26
80.296	205.7 0.28	4n 0.2 26-Inch
86.231	197.5 0.32	4n 0.4 26-Inch

Tokovinen, 1987: -0.7, -0.04; -0.7, -0.03.

10107	BU 817	16 32.5 +23 14
78.510	329.4 0.91	2 5 0.0 3 0.2 26
78.516	330.6 0.93	2 5 -0.2 3 0.1 26
78.526	327.6 0.93	2 6 -0.1 3 0.2 26
78.517	329.2 0.92	3n 0.2 26-Inch

10134	ROE 118	16 38.3 +07 53
86.449	37.3 6.17	2 6 -0.1 3 0.2 26
87.555	37.9 5.93	2 6 0.0 3 0.0 26
87.572	37.3 6.05	2 6 -0.2 3 0.0 26
87.192	37.5 6.05	3n 0.1 26-Inch

10136	HU 485	16 38.8 +22 45
75.501	278.7 4.30	2 6 -0.3 3 1.8 26
75.501	278.7 4.30	1n 1.8 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

135

10157	STF 2084	16 41.3 +31 35
77.535	161.1 1.28	4 6 0.0 3 2.5 26
77.574	163.0 1.23	4 5 -0.3 4 2.5 26
77.593	157.4 1.23	1 6 -0.3 3 2.5 26
77.631	159.6 1.13	1 8 +0.7 3 2.6 26
78.510	152.3 1.12	1 7 0.0 3 2.4 26
78.512	156.0 1.45	3 6 -0.1 3 1.8 26
78.516	151.6 1.18	2 5 -0.3 3 2.5 26
78.526	152.6 1.20	3 6 -0.2 3 2.5 26
79.425	142.8 1.13	2 7 +0.1 3 2.4 26
80.449	134.4 1.15	2 7 0.0 3 2.4 26
80.618	130.2 1.18	2 7 +0.1 3 2.5 26
80.654	131.5 1.23	2 8 +0.7 3 2.4 26
82.313	122.1 1.45	2 5 0.0 3 2.6 26
82.346	124.7 1.32	2 7 0.1 3 2.5 26
84.530	109.5 1.39	2 7 +0.1 3 2.6 26
84.565	110.0 1.44	2 6 +0.1 3 2.8 26
85.526	105.1 1.56	2 8 +0.1 3 2.4 26
85.543	101.8 1.35	2 6 0.0 3 2.8 26
86.422	100.6 1.55	2 6 0.0 3 2.4 26
86.449	99.9 1.37	2 7 -0.3 3 2.4 26
86.463	101.0 1.50	2 7 -0.2 3 2.5 26
87.555	94.5 1.40	2 7 0.0 3 2.8 26
87.558	93.4 1.53	2 8 -0.3 3 3.0 26
87.572	93.8 1.55	2 6 -0.3 3 3.0 26
87.575	93.6 1.44	2 7 -0.3 3 2.8 26
77.583	160.3 1.22	4n 2.5 26-Inch
78.516	153.1 1.24	4n 2.3 26-Inch
80.286	134.7 1.17	4n 2.4 26-Inch
82.330	123.4 1.38	2n 2.6 26-Inch
85.041	106.6 1.44	4n 2.7 26-Inch
86.445	100.5 1.47	3n 2.4 26-Inch
87.565	93.8 1.48	4n 2.9 26-Inch

Baize, 1976: -0.3, +0.02; +0.3, +0.01;
-5.0, -0.09; -2.3, +0.04;
-2.9, -0.01; -1.4, -0.02;
-2.4, -0.05.

10158	A 349	16 41.3 +30 06
82.313	175.1 0.47	2 6 +0.1 3 0.5 26
82.346	176.4 0.46	2 6 0.0 3 0.4 26
85.526	175.6 0.51	2 7 0.0 3 0.7 26
83.395	175.7 0.48	3n 0.5 26-Inch

Couteau, 1974: +4.8, -0.07.
Baize, 1983: +6.1, -0.03.

10165	MU 487	16 42.1 +21 52
76.405	229.6 0.24	2 5 0.0 4 0.0 26
78.526	231.4 0.22	2 6 -0.1 3 0.0 26
78.529	231.0 0.24	2 8 +0.1 3 0.1 26
78.551	233.5 0.20	2 7 +0.1 3 0.2 26
78.003	231.4 0.22	4n 0.1 26-Inch

FIN 251	16 43.8 -53 29
80.240	288.2 0.33 2 7 +0.2 3 0.0 36
80.246	285.8 0.32 2 6 +0.1 3 0.1 36
80.243	287.0 0.32 2n 0.0 36-Inch

Increase in angle. This is the only measure since discovery in 1930.

10188	D 15	16 43.9 +43 29
78.510	146.6 1.23	2 7 -0.1 3 0.1 26
78.512	145.8 1.21	2 5 0.0 3 0.2 26
78.516	145.8 1.21	2 7 -0.3 3 0.1 26
78.526	144.1 1.19	2 6 0.0 3 0.1 26
82.313	142.0 1.15	2 5 -0.1 3 0.0 26
82.346	140.2 1.15	2 5 -0.2 3 0.0 26
85.526	137.7 1.09	2 7 -0.1 3 0.0 26
85.543	138.6 1.00	2 6 0.0 3 0.1 26
86.463	138.2 1.13	2 7 -0.2 3 0.3 26
86.556	133.8 1.05	2 5 -0.2 3 0.2 26
87.555	133.5 0.93	2 6 -0.2 3 0.0 26
87.558	134.5 1.05	2 7 -0.4 3 0.2 26
78.516	145.6 1.21	4n 0.1 26-Inch
83.932	139.6 1.10	4n 0.0 26-Inch
87.033	135.0 1.04	4n 0.2 26-Inch

Wierzbinski, 1957: +2.2, +0.02; +0.9, 0.00;
-0.5, +0.01.

FIN 250	16 44.2 -58 33
80.246	154.0 0.36 2 6 +0.2 3 0.0 36
80.251	156.8 0.33 2 7 +0.3 3 0.0 36
80.248	155.4 0.34 2n 0.0 36-Inch

Decrease in angle and separation.

10202	A 1864	16 45.4 +44 46
76.405	309.8 0.20	3 6 -0.1 4 0.0 26
77.535	314.3 0.22	2 6 0.0 3 0.1 26
78.516	305.5 0.18	2 7 -0.3 3 0.0 26
77.485	309.9 0.20	3n 0.0 26-Inch

Closed in with little angular change.

10196	A 1141	16 45.7 -00 46
78.529	5.2 0.15	1 8 +0.2 3 26
80.227	359.5 0.16	2 7 +0.1 3 0.0 60
80.230	1.5 0.18	1 6 0.0 3 0.0 60
80.232	359.4 0.17	1 4 0.0 3 0.0 60
78.529	5.2 0.15	1n 26-Inch
80.230	0.1 0.17	3n 0.0 60-Inch
Baize, 1976: +0.3, -0.04; -1.9, -0.01.		
Heintz, 1982: -2.0, -0.03; -4.6, +0.01.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

I 1595						16 47.7 43 56						COU 492						16 53.9 +25 47											
80.240	98.4	0.40	2 7	+0.3 3	0.0 36	85.589	96.7	0.49	1 2	-0.3 3	0.3 26	80.246	106.6	0.24	2 5	+0.3 3	36	86.422	93.8	0.49	2 6	0.0 3	0.3 26	86.449	96.3	0.47	2 5	-0.2 3	0.0 26
80.243	102.5	0.32	2n	0.0	36-Inch	86.153	95.6	0.48	3n	0.2	26-Inch																		
10217	BU 43					16 48.3 +02 44					10253	A 350					16 54.0 +29 06												
87.572	236.9	1.31	2 6	-0.3 3	0.0 26	82.313	148.9	0.48	2 5	0.0 3	0.4 26	87.575	235.6	1.28	2 7	-0.2 3	0.2 26	82.346	148.4	0.46	2 7	-0.1 3	0.3 26	87.591	236.3	1.26	2 6	-0.1 3	0.0 26
87.632	238.1	1.36	2 5	+0.3 3	26	85.526	144.5	0.49	2 7	-0.1 3	0.2 26	87.592	236.7	1.30	4n	0.1	26-Inch	83.395	147.3	0.48	3n	0.3	26-Inch						
10227	A 1866 BC					16 49.2 +45 59					KUI 75					16 55.5 -08 19													
77.535	26.5	0.23	2 6	0.0 3	0.0 26	80.224	260.4	0.22	2 5	0.0 3	0.2 60	77.535	26.5	0.23	1n	0.0	26-Inch	80.227	266.8	0.20	2 5	+0.1 3	60	80.230	269.2	0.20	2 7	-0.1 3	0.2 60
Popovic, 1969: -0.1, -0.03.						80.227						265.5	0.21	3n	0.2	60-Inch	Heintz, 1984: +3.1, -0.01.												
10229	STF 2106					16 51.2 +09 25					10260	STF 3106					16 55.6 -05 11												
84.623	179.0	0.53	1 7	+0.2 3	1.5 26	79.425	256.7	2.06	2 6	0.0 3	0.1 26	85.559	172.3	0.46	1 5	-0.3 3	1.0 26	80.449	255.0	1.94	2 7	0.0 3	0.2 26	85.587	180.6	0.56	1 7	-0.5 3	1.2 26
85.589	180.9	0.62	1 6	-0.3 3	1.4 26	81.579	256.2	2.04	2 6	-0.1 3	0.1 26	87.555	179.5	0.46	1 6	0.0 3	1.2 26	80.484	256.0	2.01	3n	0.1	26-Inch	87.558	183.0	0.61	1 7	-0.3 3	1.2 26
87.558	183.0	0.61	1 7	-0.3 3	1.2 26	80.251	8.6	0.35	2 8	+0.1 3	0.2 36	87.572	181.1	0.57	1 6	-0.2 3	1.3 26	80.251	8.6	0.35	1n	0.2	36-Inch	87.575	183.0	0.57	1 7	-0.2 3	0.8 26
87.575	183.0	0.57	1 7	-0.2 3	0.8 26	80.257	BU 241	16 55.6 -21 34				87.589	181.6	0.55	4n	1.1	26-Inch	81.628	71.9	1.11	4n	0.3	26-Inch	87.587	183.0	0.57	1 7	-0.2 3	0.8 26
87.587	180.6	0.56	1 7	-0.5 3	1.2 26	80.251	8.6	0.35	1n	0.2	36-Inch	87.591	181.1	0.57	1 6	-0.2 3	1.3 26	85.570	70.6	1.02	4n	0.4	26-Inch	87.592	183.0	0.57	1 7	-0.2 3	0.8 26
87.591	181.1	0.57	1 6	-0.2 3	1.3 26	Heintz, 1963: 0.0, -0.04; +4.4, -0.05.						85.579	70.6	1.23	2 6	-0.1 3	0.3 26	Scardia, 1981: +2.5, -0.07; +1.5, -0.18.											
87.592	183.0	0.57	1 7	-0.2 3	0.8 26	10230	STT 315					16 51.4 +01 13					85.587	70.5	1.09	2 5	-0.3 3	0.5 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	
87.595	183.0	0.57	1 7	-0.2 3	0.8 26	87.558	332.1	0.22	2 7	-0.3 3	1.5 26	87.572	329.9	0.22	2 6	-0.1 3	1.8 26	81.637	72.8	1.04	2 6	-0.2 3	0.4 26	87.575	334.4	0.26	1 7	-0.2 3	1.8 26
87.598	183.0	0.57	1 7	-0.2 3	0.8 26	87.575	334.4	0.26	1 7	-0.2 3	1.8 26	87.579	335.0	0.27	1 6	-0.2 3	1.8 26	81.645	73.2	1.08	2 5	+0.2 3	0.3 26	87.587	335.0	0.27	1 6	-0.2 3	1.8 26
87.599	183.0	0.57	1 6	-0.2 3	1.8 26	87.587	335.0	0.27	1 6	-0.2 3	1.8 26	87.591	335.0	0.27	1 6	-0.2 3	1.8 26	81.650	71.0	1.10	2 6	+0.3 3	26	87.592	335.0	0.27	1 6	-0.2 3	1.8 26
87.600	183.0	0.57	1 6	-0.2 3	1.8 26	87.592	335.0	0.27	1 6	-0.2 3	1.8 26	87.595	335.0	0.27	1 6	-0.2 3	1.8 26	85.543	70.4	1.04	2 6	-0.2 3	0.5 26	87.598	335.0	0.27	1 6	-0.2 3	1.8 26
87.601	183.0	0.57	1 6	-0.2 3	1.8 26	87.595	335.0	0.27	1 6	-0.2 3	1.8 26	87.598	335.0	0.27	1 6	-0.2 3	1.8 26	85.559	72.1	0.96	2 5	-0.3 3	0.5 26	87.599	335.0	0.27	1 6	-0.2 3	1.8 26
87.602	183.0	0.57	1 6	-0.2 3	1.8 26	87.598	335.0	0.27	1 6	-0.2 3	1.8 26	87.600	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.601	335.0	0.27	1 6	-0.2 3	1.8 26
87.603	183.0	0.57	1 6	-0.2 3	1.8 26	87.601	335.0	0.27	1 6	-0.2 3	1.8 26	87.603	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.604	335.0	0.27	1 6	-0.2 3	1.8 26
87.604	183.0	0.57	1 6	-0.2 3	1.8 26	87.603	335.0	0.27	1 6	-0.2 3	1.8 26	87.605	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.606	335.0	0.27	1 6	-0.2 3	1.8 26
87.605	183.0	0.57	1 6	-0.2 3	1.8 26	87.604	335.0	0.27	1 6	-0.2 3	1.8 26	87.606	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.607	335.0	0.27	1 6	-0.2 3	1.8 26
87.606	183.0	0.57	1 6	-0.2 3	1.8 26	87.605	335.0	0.27	1 6	-0.2 3	1.8 26	87.607	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.608	335.0	0.27	1 6	-0.2 3	1.8 26
87.607	183.0	0.57	1 6	-0.2 3	1.8 26	87.606	335.0	0.27	1 6	-0.2 3	1.8 26	87.608	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.609	335.0	0.27	1 6	-0.2 3	1.8 26
87.608	183.0	0.57	1 6	-0.2 3	1.8 26	87.607	335.0	0.27	1 6	-0.2 3	1.8 26	87.609	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.610	335.0	0.27	1 6	-0.2 3	1.8 26
87.609	183.0	0.57	1 6	-0.2 3	1.8 26	87.608	335.0	0.27	1 6	-0.2 3	1.8 26	87.610	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.611	335.0	0.27	1 6	-0.2 3	1.8 26
87.610	183.0	0.57	1 6	-0.2 3	1.8 26	87.609	335.0	0.27	1 6	-0.2 3	1.8 26	87.611	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.612	335.0	0.27	1 6	-0.2 3	1.8 26
87.611	183.0	0.57	1 6	-0.2 3	1.8 26	87.610	335.0	0.27	1 6	-0.2 3	1.8 26	87.612	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.613	335.0	0.27	1 6	-0.2 3	1.8 26
87.612	183.0	0.57	1 6	-0.2 3	1.8 26	87.611	335.0	0.27	1 6	-0.2 3	1.8 26	87.613	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.614	335.0	0.27	1 6	-0.2 3	1.8 26
87.613	183.0	0.57	1 6	-0.2 3	1.8 26	87.612	335.0	0.27	1 6	-0.2 3	1.8 26	87.614	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.615	335.0	0.27	1 6	-0.2 3	1.8 26
87.614	183.0	0.57	1 6	-0.2 3	1.8 26	87.613	335.0	0.27	1 6	-0.2 3	1.8 26	87.615	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.616	335.0	0.27	1 6	-0.2 3	1.8 26
87.615	183.0	0.57	1 6	-0.2 3	1.8 26	87.614	335.0	0.27	1 6	-0.2 3	1.8 26	87.616	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.617	335.0	0.27	1 6	-0.2 3	1.8 26
87.616	183.0	0.57	1 6	-0.2 3	1.8 26	87.615	335.0	0.27	1 6	-0.2 3	1.8 26	87.617	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.618	335.0	0.27	1 6	-0.2 3	1.8 26
87.617	183.0	0.57	1 6	-0.2 3	1.8 26	87.616	335.0	0.27	1 6	-0.2 3	1.8 26	87.618	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.619	335.0	0.27	1 6	-0.2 3	1.8 26
87.618	183.0	0.57	1 6	-0.2 3	1.8 26	87.617	335.0	0.27	1 6	-0.2 3	1.8 26	87.619	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.620	335.0	0.27	1 6	-0.2 3	1.8 26
87.619	183.0	0.57	1 6	-0.2 3	1.8 26	87.618	335.0	0.27	1 6	-0.2 3	1.8 26	87.620	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.621	335.0	0.27	1 6	-0.2 3	1.8 26
87.620	183.0	0.57	1 6	-0.2 3	1.8 26	87.619	335.0	0.27	1 6	-0.2 3	1.8 26	87.621	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.622	335.0	0.27	1 6	-0.2 3	1.8 26
87.621	183.0	0.57	1 6	-0.2 3	1.8 26	87.620	335.0	0.27	1 6	-0.2 3	1.8 26	87.622	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.623	335.0	0.27	1 6	-0.2 3	1.8 26
87.622	183.0	0.57	1 6	-0.2 3	1.8 26	87.621	335.0	0.27	1 6	-0.2 3	1.8 26	87.623	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.624	335.0	0.27	1 6	-0.2 3	1.8 26
87.623	183.0	0.57	1 6	-0.2 3	1.8 26	87.622	335.0	0.27	1 6	-0.2 3	1.8 26	87.624	335.0	0.27	1 6	-0.2 3	1.8 26	85.587	70.5	1.09	2 5	-0.3 3	0.5 26	87.625	335.0	0.27	1 6	-0.2 3	1.8 26
87.624	183.0	0.57	1 6	-0.2 3	1.8 26	87.623	335.0	0.27	1 6	-0.2 3	1.8 26	87.625	335.0	0.27	1 6	-0.2 3	1.8 26	85.589	69.4	0.99	2 6	-0.2 3	0.0 26	87.626	335.0	0.27	1 6	-0.2 3	1.8 26
87.625	183.0	0.57	1 6	-0.2 3	1.8 26	87.624	335.0	0.27	1 6	-0.2 3	1.8 26	87.626	335.0	0.27	1 6	-0.2 3	1.8 26	85.599	72.1	0.96	2 5	-0.3 3	0.5 26	87.627	335.0	0.27	1 6	-0.2 3	1.8 26
87.626	183.0	0.57	1 6	-0.2 3	1.8 26	87.625	335.0	0.27	1 6	-0.2 3	1.8 26	87.627	335.0	0.27	1 6	-0.2 3	1.8 26	85.587											

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

137

10276	A 1143 AB	16 56.6 +57 11		10287	HU 162	16 59.3 -16 54	
85.543	260.2	0.41	2 6 0 0 3 0.3 26	80.230	218.2	0.62	2 7 0.0 3 0.0 60
85.587	260.9	0.42	2 5 -0.2 3 0.3 26	80.232	216.9	0.63	2 5 -0.1 3 0.0 60
85.589	259.6	0.32	2 6 -0.2 3 0.2 26				
85.573	260.2	0.38	3n 0.3 26-Inch	80.231	217.6	0.62	2n 0.0 60-Inch
Heintz, 1974: +2.8, -0.02.					SEE 316		17 00.5 -48 39
Starikova, 1983: +2.6, 0.00.				80.246	174.3	0.94	2 5 +0.2 3 1.0 36
				80.251	170.0	0.88	2 7 +0.2 3 0.9 36
	CD			80.248	172.2	0.91	2n 1.0 36-Inch
85.559	144.5	0.63	2 5 -0.2 3 26				
85.587	144.9	0.73	2 5 -0.2 3 0.1 26				
85.589	142.1	0.61	2 5 -0.1 3 0.4 26	10312	STF 2114	17 02.0 +08 27	
85.578	143.8	0.66	3n 0.2 26-Inch	80.654	185.8	1.21	2 8 +0.4 3 0.6 26
				80.659	187.1	1.25	1 8 +0.7 3 0.7 26
10265	BU 1117	16 56.8 -23 09		80.676	186.8	1.26	1 7 +0.3 3 0.8 26
80.251	299.0	1.00	2 8 -0.1 3 0.2 36	86.422	187.0	1.35	1 6 0.0 3 0.5 26
80.251	299.0	1.00	1n 0.2 36-Inch	86.449	187.3	1.14	1 5 -0.1 3 26
				86.463	187.0	1.46	1 5 -0.1 3 0.8 26
				86.657	186.3	1.37	1 5 +0.2 3 1.0 26
				80.663	186.6	1.24	3n 0.7 26-Inch
	COU 1772	16 57.6 +49 35		86.498	186.9	1.33	4n 0.8 26-Inch
86.463	83.1	0.23	2 6 -0.2 3 26				
87.575	82.3	0.25	2 7 -0.2 3 0.0 26	10340	A 1146	17 03.6 +69 48	
87.591	82.0	0.26	2 6 -0.1 3 0.0 26	81.579	127.4	0.31	2 6 -0.1 3 0.0 26
87.210	82.5	0.25	3n 0.0 26-Inch	81.615	130.5	0.30	2 4 +0.3 3 0.0 26
				81.631	127.7	0.34	2 6 0.0 3 0.3 26
10284	STF 2112	16 58.2 +31 47		81.637	131.9	0.35	2 6 0.0 3 0.2 26
76.262	263.8	2.19	2 4 -0.2 3 0.5 26	81.616	129.4	0.33	4n 0.1 26-Inch
76.405	262.1	2.08	2 7 0.0 4 1.0 26	Heintz, 1975: +3.7, +0.01.			
77.535	262.3	2.05	2 7 0.0 3 0.4 26				
76.734	262.7	2.11	3n 0.6 26-Inch	10328	J 449	17 05.1 +01 47	
				76.405	300.4	1.79	2 6 0.0 4 0.8 26
10293	HU 667	16 58.3 +47 53		76.613	302.8	1.76	2 7 0.0 3 0.8 26
75.498	166.3	2.36	1 6 -0.2 3 1.2 26	77.535	302.6	1.67	2 7 +0.1 3 0.8 26
75.575	167.9	2.15	2 7 +0.1 3 3.0 26	76.851	301.9	1.74	3n 0.8 26-Inch
77.535	167.8	2.22	2 7 0.0 3 2.5 26				
76.203	167.3	2.24	3n 2.2 26-Inch	10345	STF 2130	17 05.4 +54 28	
				77.574	48.9	2.00	2 5 -0.5 4 0.2 26
10261	OL 99	16 58.6 -18 03		77.593	49.0	2.01	2 7 -0.5 3 0.1 26
80.224	127.2	3.01	2 5 +0.1 3 2.5 60	77.631	49.6	2.04	2 7 +0.1 3 0.1 26
80.227	129.2	2.88	2 6 +0.2 3 2.5 60	80.449	46.4	1.96	2 8 0.0 3 0.3 26
80.226	128.2	2.94	2n 2.5 60-Inch	80.618	46.2	2.04	2 6 +0.1 3 0.2 26
				80.651	43.1	2.05	2 7 +0.3 3 0.0 26
10285	STF 3107	16 58.9 +03 58		81.579	44.2	2.09	2 6 -0.1 3 0.4 26
86.422	77.9	1.52	2 6 0.0 3 0.1 26	81.615	43.9	2.01	2 5 +0.2 3 0.4 26
86.449	79.9	1.43	2 5 -0.2 3 26	81.631	44.0	2.14	2 4 -0.5 3 0.3 26
86.463	78.8	1.50	2 5 0.0 3 0.3 26	81.637	44.0	2.09	2 6 -0.5 3 0.2 26
86.445	78.9	1.48	3n 0.2 26-Inch	85.526	38.1	2.07	2 6 0.0 3 0.2 26
				85.543	38.7	2.20	2 5 -0.1 3 0.2 26
				85.559	40.3	2.07	2 5 -0.1 3 0.3 26
				85.587	37.9	2.14	2 6 -0.2 3 0.1 26
				87.558	36.0	2.08	2 8 -0.2 3 0.2 26
				87.572	34.8	2.03	2 7 -0.3 3 0.2 26
				87.575	34.9	2.00	2 7 -0.2 3 0.1 26
				87.591	36.2	2.07	2 7 -0.2 3 0.0 26

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

77.599	49.2	2.02	3n	0.1	26-Inch	10374	BU 1118	17 10.3 -15 44
80.573	45.2	2.02	3n	0.2	26-Inch			
81.616	44.0	2.08	4n	0.3	26-Inch	80.224	269.4	0.37 2 5 0.0 3 60
85.554	38.8	2.12	4n	0.2	26-Inch	80.227	267.2	0.45 2 6 +0.1 3 60
87.574	35.5	2.04	4n	0.1	26-Inch			
Heintz, 1981:	+0.8, -0.03;	+1.0, -0.04;				80.226	268.3	0.41 2n 60-Inch
	+1.3, +0.02;	+1.7, +0.04;				Van Biesbroeck, 1960:	-0.5, +0.03.	
	+1.3, -0.05.							
Scardia, 1980:	+0.6, 0.00;	+1.0, +0.01;				LPM 629	17 11.9 -01 51	
	+1.3, +0.07;	+2.1, +0.12;						
	+1.8, +0.04.							
10336	BU 357	17 05.5 +10 33				80.230	85.0	0.69 2 7 -0.1 3 0.2 60
77.574	307.4	1.36	2 5	-0.3 4	1.8 26	80.232	85.6	0.90 2 5 -0.2 3 0.2 60
78.512	306.8	1.42	2 6	0.0 3	1.3 26			
78.516	308.9	1.35	2 6	-0.2 3	1.8 26	80.231	85.3	0.80 2n 0.2 60-Inch
78.201	307.7	1.38	3n	1.6	26-Inch	Rapid motion.		
10366	AG 352	17 06.0 +71 02				KUI 79	17 12.1 +45 44	
82.346	61.7	1.50	2 6	-0.1 3	0.0 26	77.535	160.4	0.31 2 8 0.0 3 0.2 26
85.526	61.3	1.44	2 6	0.0 3	0.0 26	77.574	158.4	0.36 2 5 -0.4 4 0.2 26
85.559	62.6	1.47	2 5	0.0 3	0.0 26	77.593	154.9	0.33 3 6 -0.4 3 0.3 26
84.477	61.9	1.47	3n	0.0	26-Inch	77.631	151.1	0.35 3 6 +0.1 3 0.4 26
10341	BU 823	17 06.6 +00 39				78.510	336.4	0.28 2 7 -0.2 3 0.2 26
80.449	120.4	0.87	2 6	-0.1 3	0.8 26	78.512	334.6	0.28 2 7 -0.3 3 0.4 26
80.654	122.2	0.95	2 8	+0.5 3	0.8 26	78.516	341.4	0.33 2 5 -0.4 3 0.3 26
80.657	122.3	0.88	2 6	+0.5 3	0.8 26	78.526	331.8	0.30 2 6 -0.4 3 0.2 26
80.659	120.8	0.82	2 8	+0.8 3	0.8 26	78.529	332.0	0.29 2 8 0.0 3 0.4 26
84.623	124.7	0.90	2 6	+0.1 3	0.5 26	78.551	332.1	0.30 2 7 -0.3 3 0.2 26
85.587	128.6	0.85	2 6	-0.1 3	0.9 26	80.449	276.0	0.71 2 7 0.0 3 0.2 26
85.589	128.5	0.91	2 6	-0.1 3	1.0 26	81.579	266.2	1.01 2 7 0.0 3 0.2 26
85.644	130.6	0.90	2 5	-0.2 3	0.8 26	81.637	263.9	0.92 2 6 0.0 3 0.2 26
80.605	121.4	0.88	4n	0.8	26-Inch	82.313	258.8	0.96 2 5 -0.1 3 0.4 26
85.361	128.1	0.89	4n	0.8	26-Inch	82.346	255.7	0.86 2 7 0.0 3 0.5 26
Arend, 1956:	+2.7, -0.12;	+4.4, -0.16.				85.526	233.9	1.15 2 5 -0.1 3 0.2 26
10367	HU 918	17 07.4 +62 28				85.543	234.7	1.25 2 5 0.0 3 0.2 26
81.579	118.6	0.29	2 6	0.0 3	26	85.559	234.9	1.08 2 5 0.0 3 0.4 26
82.313	122.1	0.31	2 5	0.0 3	0.4 26	85.587	232.8	1.12 2 7 -0.2 3 0.8 26
82.346	131.2	0.29	2 7	-0.1 3	0.3 26	86.422	226.6	1.09 2 6 -0.1 3 26
82.079	124.0	0.30	3n	0.3	26-Inch	86.449	225.5	1.05 2 5 -0.2 3 26
10358	A 2237	17 08.8 +00 02				86.463	221.8	1.20 2 6 -0.1 3 0.4 26
77.574	67.7	0.94	2 5	-0.2 4	2.2 26	87.555	217.8	0.79 2 6 -0.2 3 0.5 26
78.512	69.4	0.82	2 6	0.0 3	1.5 26	87.558	216.8	1.09 2 7 -0.2 3 0.5 26
78.529	68.0	0.92	2 8	0.0 3	2.4 26	87.572	216.0	0.85 2 6 -0.2 3 0.7 26
78.205	68.4	0.89	3n	2.0	26-Inch	87.575	215.0	0.95 2 7 -0.2 3 0.5 26
						77.583	156.2	0.34 4n 0.3 26-Inch
						78.524	334.7	0.30 6n 0.3 26-Inch
						81.205	268.7	0.88 3n 0.2 26-Inch
						82.330	257.2	0.91 2n 0.4 26-Inch
						85.554	234.1	1.15 4n 0.4 26-Inch
						86.445	224.6	1.11 3n 0.4 26-Inch
						87.565	216.4	0.92 4n 0.5 26-Inch
						Baize, 1952:	+2.8, +0.02; -8.2, +0.01;	
							+1.6, 0.00; +0.9, -0.07;	
							+1.2, +0.04; -1.9, +0.04;	
							-1.1, -0.06.	
						COU 314	17 12.9 +23 12	
						85.589	1.7	1.78 1 6 -0.1 3 0.3 26
						86.422	2.0	1.99 1 6 0.0 3 0.2 26
						86.463	1.1	1.87 2 6 0.0 3 0.6 26
						86.158	1.6	1.88 3n 0.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

139

10410	STF 2146	17 13.0 +54 07	10450	BU 629	17 17.4 +32 06
87.558	225.0 2.75	2 7 -0.2 3 2.0 26	81.579	339.5 1.32	2 4 -0.2 3 0.8 26
87.572	224.3 2.53	2 6 -0.2 3 1.8 26	85.526	344.2 1.22	2 6 +0.1 3 0.8 26
87.575	224.5 2.81	2 7 -0.1 3 1.8 26	85.543	344.0 1.17	2 5 0.0 3 0.4 26
87.568	224.6 2.70	3n 1.9 26-Inch	84.216	342.6 1.24	3n 0.7 26-Inch
10398	STT 325	17 13.0 +07 45	10460	STF 2153	17 18.0 +49 19
81.653	247.5 0.34	2 8 0.0 3 1.8 26	78.510	254.3 1.55	2 7 -0.2 3 0.3 26
81.656	246.0 0.45	2 7 +0.1 3 1.5 26	78.512	254.7 1.61	2 7 0.0 3 0.2 26
85.543	246.8 0.40	2 5 0.0 3 1.5 26	78.516	254.4 1.60	2 6 -0.1 3 0.3 26
85.587	247.8 0.34	2 6 -0.1 3 1.5 26	78.513	254.5 1.59	3n 0.3 26-Inch
85.589	254.5 0.31	2 6 -0.1 3 1.3 26	10469	SWI	17 18.2 +53 38
84.006	248.5 0.37	5n 1.5 26-Inch	87.555	170.7 0.40	2 6 -0.1 3 26
Becoming a difficult pair as it closes in.			87.558	168.2 0.49	2 7 0.0 3 0.4 26
10425	STT 327	17 14.1 +56 08	87.572	171.9 0.37	2 6 0.0 3 0.4 26
78.510	294.3 0.17	2 6 -0.2 3 0.0 26	87.575	165.0 0.48	2 6 -0.1 3 0.3 26
78.512	294.0 0.18	2 6 0.0 3 0.0 26	87.565	169.0 0.44	4n 0.4 26-Inch
78.516	296.6 0.16	2 6 -0.2 3 0.0 26	10459	BU 628	17 18.3 +32 40
78.526	290.5 0.17	2 5 -0.3 3 0.0 26	82.313	290.5 0.38	2 5 +0.1 3 0.5 26
87.558	316.6 0.33	2 7 -0.2 3 0.2 26	82.346	291.1 0.33	2 7 0.0 3 0.6 26
87.572	319.2 0.28	2 6 -0.1 3 0.3 26	85.587	284.1 0.38	2 6 0.0 3 0.5 26
87.575	316.9 0.32	2 6 0.0 3 26	83.415	288.6 0.36	3n 0.5 26-Inch
87.591	311.9 0.31	2 7 -0.2 3 0.0 26	Zulevic, 1986: +5.4, -0.01.		
78.516	293.8 0.17	4n 0.0 26-Inch	MLO 4 17 18.7 -34 59		
87.574	316.2 0.31	4n 0.1 26-Inch	80.240	320.0 1.51	2 7 -0.1 3 0.4 36
Heintz, 1976: +8.4, +0.02; +5.7, +0.01.			80.246	322.8 1.42	2 5 0.0 3 0.7 36
10426	HU 489	17 15.5 +20 07	80.251	319.6 1.48	2 7 0.0 3 0.8 36
82.313	35.7 0.99	2 5 0.0 3 0.6 26	80.246	320.8 1.47	3n 0.6 36-Inch
85.526	37.8 0.96	2 6 0.0 3 0.6 26	Hirst, 1943: +3.0, +0.05.		
85.587	39.7 0.98	2 6 0.0 3 1.0 26	10480	A 2593	17 20.7 -07 06
84.475	37.7 0.98	3n 0.7 26-Inch	80.240	155.6 0.27	2 7 +0.1 3 0.1 36
10423	A 2592	17 15.7 -09 49	80.246	158.1 0.25	2 5 +0.1 3 36
80.230	232.2 0.42	2 6 0.0 3 0.4 60	80.251	157.7 0.24	2 7 +0.1 3 0.0 36
80.232	230.8 0.32	2 6 -0.1 3 0.2 60	80.246	157.1 0.25	3n 0.0 36-Inch
80.231	231.5 0.37	2n 0.3 60-Inch	Heintz, 1986: -3.2, -0.01.		
Heintz, 1978: -1.6, -0.04.			10429	A 2984	17 16.5 -00 27
80.449	357.8 1.04	1 6 +0.1 3 2.5 26	KUI 80 17 21.6 +28 45		
80.618	353.8 1.14	1 5 +0.1 3 2.3 26	84.623	155.0 0.56	3 6 +0.1 3 2.4 26
80.651	355.8 1.04	1 7 +0.2 3 2.4 26	85.587	165.3 0.60	2 6 0.0 3 2.2 26
80.573	355.8 1.07	3n 2.4 26-Inch	85.644	167.6 0.50	2 6 +0.1 3 2.0 26
			85.285	162.6 0.55	3n 2.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

10506	ROE 108	17 22.2 +30 10	10540	BU 1250	17 24.8 +30 44
86.422	2.3 6.10	2 6 -0.1 3 0.2 26	78.526	103.0 1.94	2 5 -0.1 3 0.3 26
87.558	3.0 5.97	2 7 -0.1 3 0.2 26	78.529	103.6 1.79	2 7 +0.3 3 0.1 26
87.575	3.0 5.97	2 7 -0.1 3 0.0 26	78.551	103.3 1.74	2 7 -0.3 3 0.2 26
			87.555	108.1 1.69	2 5 0.0 3 0.6 26
87.185	2.8 6.01	3n 0.1 26-Inch	87.558	109.8 2.07	2 7 0.0 3 0.5 26
			87.575	110.3 2.17	2 6 0.0 3 0.6 26
			87.591	111.1 2.20	2 6 -0.2 3 0.3 26
			78.535	103.3 1.82	3n 0.2 26-Inch
10516	A 2183	17 23.5 +16 54	87.570	109.8 2.03	4n 0.5 26-Inch
82.346	130.7 1.07	2 7 -0.1 3 3.0 26			
85.559	129.7 1.15	2 6 0.0 3 2.4 26	10544	A 2089	17 25.0 +17 02
85.587	130.7 1.21	2 6 0.0 3 1.8 26	76.613	335.2 0.56	1 6 0.0 3 0.4 26
			77.574	336.6 0.69	2 5 -0.3 4 0.3 26
34.497	130.4 1.14	3n 2.4 26-Inch	77.593	337.6 0.62	2 6 -0.5 3 0.6 26
			77.260	336.5 0.62	3n 0.4 26-Inch
10509	HLD 133	17 23.6 -21 43			
80.246	167.6 0.99	2 5 +0.1 3 0.4 36	10566	HO 68	17 26.2 +63 11
80.251	168.8 1.03	2 6 +0.1 3 0.4 36	78.510	234.7 1.97	2 7 -0.1 3 0.1 26
			78.512	237.1 2.01	2 6 0.0 3 0.0 26
80.248	168.2 1.01	2n 0.4 36-Inch	78.516	237.2 1.93	2 6 -0.1 3 0.0 26
			78.513	236.3 1.97	3n 0.0 26-Inch
10521	HU 671	17 23.8 +21 55			
85.589	267.3 0.76	2 6 -0.1 3 0.6 26	10573	BU 1201	17 26.3 +67 46
85.641	273.9 0.82	2 5 -0.2 3 0.6 26	77.593	334.5 0.23	1 6 -0.5 3 0.2 26
85.644	271.4 0.82	2 6 0.0 3 0.6 26	78.510	339.5 0.22	2 7 0.0 3 0.1 26
			78.512	346.9 0.24	2 6 0.0 3 0.0 26
85.625	270.9 0.80	3n 0.6 26-Inch	78.516	343.3 0.21	1 5 0.0 3 0.2 26
			78.283	341.0 0.22	4n 0.1 26-Inch
10542	FOX 78	17 23.9 +60 14		I 1322	17 26.9 -24 23
78.510	227.0 0.97	2 6 -0.2 3 0.6 26	80.246	96.6 0.34	2 5 +0.1 3 0.3 36
78.512	227.4 1.08	2 6 0.0 3 0.7 26	80.251	103.2 0.34	2 6 +0.2 3 0.4 36
78.516	226.3 0.99	2 6 -0.1 3 0.8 26	80.248	99.9 0.34	2n 0.4 36-Inch
78.513	226.9 1.01	3n 0.7 26-Inch		Direct motion.	
				COU 498	17 27.6 +26 24
10515	BU 242	17 24.0 -11 42	85.559	61.8 0.31	2 6 +0.1 3 0.3 26
77.535	78.4 0.98	2 5 -0.1 3 0.5 26	85.587	43.1 0.36	2 6 +0.1 3 0.2 26
78.526	76.1 1.05	2 5 -0.3 3 0.6 26	86.463	43.2 0.35	2 5 -0.1 3 26
78.529	78.1 1.02	2 6 0.0 3 0.8 26	85.870	49.4 0.34	3n 0.2 26-Inch
78.197	77.5 1.02	3n 0.6 26-Inch			
			10560	A 2184	17 27.6 +16 27
			78.526	25.0 1.48	2 6 -0.1 3 2.5 26
10528	STF 2160	17 24.5 +15 37	78.529	21.0 1.55	2 7 +0.2 3 2.5 26
84.648	67.2	2 6 -0.1 3 2.8 26	78.551	26.2 1.56	2 7 -0.2 3 2.8 26
85.543	67.9 3.83	2 5 0.0 3 1.7 26	87.558	24.2 1.64	2 7 0.0 3 3.0 26
85.589	65.8 3.80	2 6 -0.1 3 3.2 26	87.575	21.0 1.62	1 7 0.0 3 3.0 26
85.641	67.2 3.80	2 6 0.0 3 3.0 26	87.591	24.3 1.63	2 7 -0.2 3 3.0 26
			87.632	28.6 1.51	2 5 -0.2 3 1.8 26
85.355	67.0 3.81	3n 2.7 26-Inch	78.535	24.1 1.53	3n 2.6 26-Inch
			87.589	24.5 1.60	4n 2.7 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

141

10561	A 2244	17 28.3 -20 58	85.543	335.7	0.91	2 5	0.0	3 0.0	26				
80.230	74.0	0.17	2 7	+0.1	3 0.0	60	85.559	338.5	0.93	2 7	+0.2	3 0.1	26
80.232	70.5	0.18	2 6	-0.2	3 0.0	60	85.587	337.5	0.96	2 7	0.0	3 0.0	26
80.231	72.2	0.18	2n	0.0	60-Inch		85.641	337.7	1.01	2 6	-0.1	3 0.0	26
Muller, 1955: +3.0, -0.02.							86.422	339.9	1.12	1 6	-0.1	3 0.0	26
							86.463	341.2	1.02	2 7	-0.1	3 0.3	26
							86.657	335.9	1.07	2 5	0.0	3	26
							86.660	337.0	0.95	2 7	-0.3	3	26
							87.555	336.8	0.91	2 6	0.0	3 0.0	26
							87.558	336.1	1.09	2 7	0.0	3	26
10579	HU 176	17 29.3 +08 11	87.572	335.2	1.00	2 6	0.0	3 0.3	26				
80.449	147.7	0.28	2 7	0.0	3 0.0	26	87.575	338.3	1.05	2 7	0.0	3 0.0	26
81.653	159.1	0.28	2 8	0.0	3 0.2	26	77.583	12.2	0.26	4n	0.2	26-Inch	
81.656	149.7	0.30	2 7	+0.1	3 0.2	26	78.516	1.3	0.28	4n	0.3	26-Inch	
84.623	141.2	0.26	2 7	+0.1	3 0.0	26	80.286	351.4	0.44	4n	0.1	26-Inch	
84.648	152.8	0.25	2 7	0.0	3 0.2	26	81.616	346.8	0.62	4n	0.3	26-Inch	
85.589	144.5	0.25	2 6	0.0	3	26	82.330	345.8	0.66	2n	0.3	26-Inch	
81.253	152.2	0.29	3n	0.1	26-Inch		85.582	337.4	0.95	4n	0.0	26-Inch	
84.953	146.2	0.25	3n	0.1	26-Inch		86.550	338.5	1.04	4n	0.1	26-Inch	
							87.565	336.6	1.01	4n	0.1	26-Inch	
10576	STF 2171	17 29.3 -10 00	Wilson, 1976: -0.4, -0.01; +0.5, -0.09;										
78.526	63.7	1.39	2 5	0.0	3 0.1	26							
78.529	63.2	1.50	2 6	+0.1	3 0.1	26							
78.551	64.2	1.40	2 7	-0.1	3 0.1	26							
78.535	63.7	1.43	3n	0.1	26-Inch								
10585	A 351	17 29.4 +29 24	10600	A 30 AB	17 30.9 -05 38								
76.613	218.8	0.15	3 7	+0.1	4 0.2	26	81.579	243.7	0.43	2 6	+0.1	3 0.2	26
77.535	226.2	0.24	1 8	-0.1	3 0.3	26	81.631	242.5	0.48	2 6	-0.3	3 0.2	26
77.574	231.1	0.23	2 6	-0.1	4 0.2	26	81.637	248.6	0.41	2 6	0.0	3 0.1	26
77.593	229.6	0.24	2 6	-0.4	3 0.4	26	81.616	244.9	0.44	3n	0.2	26-Inch	
82.346	244.0	0.41	2 7	-0.1	3 0.5	26							
85.589	250.4	0.63	2 7	0.0	3 0.3	26							
85.641	248.0	0.65	2 6	0.0	3 0.5	26							
85.644	248.5	0.65	2 6	0.0	3 0.6	26							
77.329	226.4	0.22	4n	0.3	26-Inch								
84.805	247.7	0.58	4n	0.5	26-Inch								
Baize, 1955: +1.7, +0.02; +4.8, +0.01.													
10598	STF 2173	17 30.4 -01 04											
77.535	14.7	0.25	1 6	-0.2	3 0.0	26							
77.574	11.2	0.27	1 5	0.0	4 0.2	26							
77.593	9.7	0.25	1 6	0.0	3 0.3	26							
77.631	13.3	0.29	1 6	0.0	3 0.3	26							
78.510	0.8	0.30	1 7	0.0	3 0.4	26							
78.512	5.3	0.28	1 6	+0.1	3 0.2	26							
78.516	0.8	0.27	1 6	0.0	3 0.3	26							
78.526	358.2	0.26	1 5	0.0	3 0.2	26							
79.425	355.4	0.34	1 6	-0.5	3	26							
80.449	350.9	0.43	1 7	0.0	3 0.2	26							
80.618	347.8	0.49	1 5	0.0	3 0.0	26							
80.651	351.3	0.50	1 6	0.0	3	26							
81.579	346.5	0.65	2 5	0.0	3	26							
81.615	343.6	0.56	2 5	0.0	3 0.3	26							
81.631	349.1	0.65	1 6	-0.3	3 0.2	26							
81.637	347.9	0.64	1 6	-0.2	3 0.3	26							
82.313	346.6	0.69	1 5	0.0	3 0.3	26							
82.346	345.1	0.64	1 7	0.0	3 0.3	26							
10614	STT 331	17 32.0 +02 50											
87.591	348.6	1.08	3 6	-0.1	3 1.6	26							
87.632	349.4	1.00	1 5	-0.1	3 1.2	26							
87.635	349.6	1.14	4 6	-0.1	3 1.5	26							
87.667	349.7	1.01	1 5	0.0	3 1.2	26							
87.631	349.3	1.04	4n	1.4	26-Inch								
10631	A 1877	17 33.9 +14 46											
78.551	46.5	0.59	2 7	0.0	3 0.6	26							
85.526	52.1	0.49	4 7	0.0	3 0.6	26							
85.589	50.5	0.61	2 6	0.0	3 0.5	26							
83.222	49.7	0.56	3n	0.6	26-Inch								

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

10660 BU 962 17 35.0 +61 53

87.591	346.9	1.39	3 6	-0.5 3	3.5 26
87.632	347.4	1.31	2 4	-0.1 3	2.5 26
87.635	345.8	1.43	3 6	-0.1 3	2.5 26

87.619 346.7 1.38 3n 2.8 26-Inch

Baize, 1965: +2.6, +0.01.

10650 STF 2186 17 35.9 +01 00

87.558	79.3	2.98	2 8	0.0 3	0.0 26
87.572	79.4	2.98	2 7	0.0 3	0.0 26
87.575	79.1	2.95	2 7	0.0 3	0.0 26

87.568 79.3 2.97 3n 0.0 26-Inch

10657 HU 751 17 36.8 -20 58

80.230	197.9	0.13	2 6	-0.1 3	60
80.232	197.7	0.12	2 6	-0.1 3	60

80.231 197.8 0.12 2n 60-Inch

Last measure in 1963. Rapid direct motion.

KUI 83 17 37.0 +27 53

77.535	82.3	0.28	2 6	0.0 3	0.3 26
77.574	85.7	0.29	2 6	-0.3 4	0.4 26
77.593	90.0	0.30	2 6	-0.4 3	0.3 26
77.631	85.0	0.34	2 7	0.0 3	0.3 26
78.510	71.6	0.28	2 6	0.0 3	0.4 26
78.512	72.3	0.29	2 6	+0.2 3	0.3 26
78.516	72.2	0.27	2 7	0.0 3	0.4 26
78.526	77.5	0.24	2 6	0.0 3	0.3 26
78.551	71.3	0.23	2 7	0.0 3	0.2 26
80.449	41.2	0.24	2 6	0.0 3	0.3 26
81.579	27.9	0.27	2 5	+0.2 3	26
81.631	19.4	0.23	2 6	-0.1 3	0.2 26
81.637	27.5	0.29	2 5	0.0 3	0.3 26
82.346	17.4	0.25	2 8	0.0 3	0.3 26
85.526	300.1	0.20	2 7	0.0 3	26
85.559	296.3	0.23	2 7	+0.2 3	0.2 26
85.587	292.8	0.20	2 6	0.0 3	0.2 26
85.641	294.4	0.21	2 6	0.0 3	26
86.422	276.7	0.20	2 6	0.0 3	26
86.463	274.2	0.20	2 5	0.0 3	26

77.583	85.8	0.30	4n	0.3	26-Inch
78.523	73.0	0.26	5n	0.3	26-Inch
81.528	26.7	0.26	5n	0.3	26-Inch
85.578	295.9	0.21	4n	0.2	26-Inch
86.442	275.4	0.20	2n		26-Inch

Baize, 1972: +3.3, +0.01; + 2.2, -0.02;
 -1.1, +0.01; -12.6, 0.00;
 -12.3, 0.00.

10677 HO 420 17 37.8 +36 59

81.631	105.3	1.64	2 6	-0.1 3	0.1 26
85.641	108.1	1.55	2 5	0.0 3	26
85.644	106.4	1.84	2 6	+0.1 3	0.2 26

84.305 106.6 1.68 3n 0.2 26-Inch

10668 B 350 17 38.1 -24 57

80.246	338.6	0.50	2 5	+0.1 3	0.4 36
80.251	338.4	0.42	2 7	+0.1 3	0.2 36

80.248 338.5 0.46 2n 0.3 36-Inch

WOR 7 17 38.7 +71 19

72.396	289.0	10.45	2 6	0.0 3	4.0 26
77.535	279.8	9.29	2 6	+0.1 3	4.0 26

72.396	289.0	10.45	1n	4.0	26-Inch
77.535	279.8	9.29	1n	4.0	26-Inch

These measures, together with the discovery one, show the pair to be optical.

10700 ROE 96 17 40.0 +12 53

85.543	68.0	7.23	2 5	-0.1 3	0.7 26
85.641	70.8	7.19	2 5	+0.2 3	0.7 26
85.644	67.9	6.89	2 6	+0.2 3	0.3 26

85.609 68.9 7.10 3n 0.6 26-Inch

This is the only measure since discovery in 1916. Probably optical.

COU 114 17 41.7 +21 30

87.558	27.9	0.28	2 8	0.0 3	0.8 26
87.572	28.7	0.30	2 7	0.0 3	1.2 26
87.575	29.6	0.27	2 6	+0.1 3	1.0 26
87.591	32.8	0.29	2 6	-0.2 3	1.4 26

87.574 29.8 0.28 4n 1.1 26-Inch

10742 HO 560 17 43.4 +33 56

81.645	87.3	1.26	2 5	-0.4 3	0.1 26
81.650	87.7	1.19	2 6	0.0 3	0.0 26
81.653	86.0	1.12	2 8	-0.2 3	0.1 26

81.649 87.0 1.19 3n 0.1 26-Inch

10743 HU 1285 17 43.6 +22 36

81.645	223.9	0.50	2 5	-0.3 3	0.3 26
81.650	221.7	0.52	2 6	0.0 3	0.4 26
81.653	221.0	0.55	2 8	-0.1 3	0.2 26

81.649 222.2 0.52 3n 0.3 26-Inch

HDO 275 17 44.3 -72 13

80.246	257.6	0.40	2 5	+0.1 3	0.0 36
80.251	256.5	0.44	2 6	+0.1 3	0.2 36

80.248 257.0 0.42 2n 0.1 36-Inch

Heintz, 1978: +1.3, -0.08.

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

143

10756	STF 2206	17 44.6 +18 59	10769	STF 2205	17 45.7 +17 43
81.645	251.5	0.97 2 5 -0.1 3 0.8 26	80.657	338.6	1.45 2 6 +0.1 3 0.7 26
81.650	251.6	0.97 2 6 +0.1 3 0.8 26	80.659	339.3	1.36 2 8 0.0 3 0.3 26
81.653	251.1	1.00 2 8 0.0 3 0.8 26	80.676	340.4	1.36 2 5 0.0 3 0.3 26
81.649	251.4	1.01 3n 0.8 26-Inch	80.700	339.2	1.58 2 5 +0.6 3 0.3 26
			85.526	342.0	1.47 2 5 0.0 3 26
			85.543	342.8	1.35 2 5 -0.1 3 0.3 26
			85.589	341.5	1.41 2 7 0.0 3 0.1 26
			85.644	339.2	1.39 2 7 +0.2 3 0.3 26
10794	HU 924	17 44.9 +66 28	80.673	339.4	1.49 4n 0.4 26-Inch
82.346	27.4	0.24 2 7 -0.1 3 0.2 26	85.576	341.4	1.40 4n 0.2 26-Inch
85.589	21.1	0.26 2 6 -0.1 3 0.2 26			
85.641	27.3	0.30 2 5 0.0 3 0.3 26	10786	AC 7 BC	17 46.5 +27 45
85.644	23.1	0.24 2 6 -0.1 3 0.3 26	77.535	18.1	0.79 2 6 +0.1 3 0.3 26
84.805	24.7	0.26 4n 0.2 26-Inch	77.574	19.6	0.84 2 6 0.0 4 0.4 26
			77.593	21.2	0.79 2 6 -0.4 3 0.5 26
			77.631	27.2	0.83 2 5 0.0 3 0.4 26
			78.510	28.2	0.92 2 7 0.0 3 0.3 26
			78.512	26.1	0.86 2 6 0.0 3 0.3 26
			78.516	26.5	0.99 2 6 0.0 3 0.3 26
			78.526	25.6	0.91 2 6 0.0 3 0.3 26
			80.449	36.5	1.25 2 7 0.0 3 0.5 26
			80.618	41.5	1.24 2 5 0.0 3 0.6 26
			80.651	39.4	1.14 2 6 -0.2 3 0.4 26
			80.654	38.5	1.28 2 8 0.0 3 0.5 26
			81.579	41.3	1.42 2 5 +0.1 3 0.4 26
			81.615	43.6	1.43 2 5 -0.2 3 0.5 26
			81.631	43.5	1.34 2 6 -0.1 3 0.4 26
			81.637	43.2	1.38 2 5 0.0 3 0.4 26
			84.623	56.1	1.52 2 3 +0.1 3 0.2 26
			84.648	52.5	1.57 2 7 -0.1 3 0.3 26
			84.713	53.4	1.55 2 6 +0.6 3 0.4 26
			86.422	58.1	1.72 2 6 0.0 3 0.4 26
			86.463	59.2	1.68 2 7 -0.1 3 0.2 26
			86.657	60.4	1.62 2 5 -0.2 3 0.4 26
			86.660	58.0	1.68 2 8 -0.3 3 0.4 26
			87.591	58.5	1.89 2 7 -0.1 3 0.5 26
			87.632	57.9	1.65 2 5 -0.2 3 0.6 26
			87.635	58.5	1.66 2 7 0.0 3 0.4 26
			87.667	59.9	1.64 2 6 0.0 3 0.5 26
			77.583	21.5	0.81 4n 0.4 26-Inch
			78.516	26.6	0.92 4n 0.3 26-Inch
			80.593	39.0	1.23 4n 0.5 26-Inch
			81.616	42.9	1.39 4n 0.4 26-Inch
			84.661	54.0	1.55 3n 0.3 26-Inch
			86.550	58.9	1.68 4n 0.4 26-Inch
			87.631	58.7	1.71 4n 0.5 26-Inch
			Couteau, 1960: +2.6, +0.01; -0.2, +0.01; +0.3, +0.07; 0.0, +0.12; +1.1, +0.04; +2.3, +0.09; -0.5, +0.11.		
10773	HO 70	17 45.6 +30 32	10795	STF 2215	17 47.1 +17 42
77.574	96.8	0.43 2 5 -0.2 4 0.1 26	80.654	271.6	0.46 2 7 -0.1 3 0.8 26
77.593	96.7	0.41 2 6 -0.3 3 0.3 26	80.657	268.5	0.45 2 6 +0.1 3 0.7 26
77.631	97.1	0.43 2 5 0.0 3 0.0 26	80.659	272.5	0.50 2 8 +0.1 3 1.2 26
77.599	96.9	0.42 3n 0.1 26-Inch	80.676	269.8	0.47 2 7 -0.2 3 1.0 26
			85.658	268.5	0.45 2 8 -0.4 3 0.7 26
			86.422	268.1	0.53 2 7 0.0 3 0.7 26
			86.463	268.2	0.49 2 6 0.0 3 1.0 26
			86.657	267.4	0.51 2 5 -0.1 3 26
10763	A 32	17 45.6 -03 30	80.662	270.6	0.47 4n 0.9 26-Inch
81.645	233.3	0.58 2 4 -0.1 3 1.4 26	86.300	268.0	0.50 4n 0.8 26-Inch
81.650	226.7	0.58 2 6 +0.2 3 1.2 26			
81.653	224.5	0.73 2 7 0.0 3 1.5 26			
81.656	221.4	0.75 2 7 0.0 3 1.7 26			
81.651	226.5	0.66 4n 1.4 26-Inch			
10764	A 31	17 45.6 -04 23			
81.645	5.1	1.15 2 4 0.0 3 26			
81.653	4.1	1.18 1 8 +0.1 3 0.0 26			
81.656	3.3	1.15 1 7 +0.1 3 0.1 26			
81.651	4.2	1.16 3n 0.0 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

10796	HU 1288		17 47.1 +15 02	10828	STT 337		17 50.5 +07 14
85.658	143.1	0.41	2 7 -0.3 3 0.4 26	87.555	175.8	0.35	1 6 -0.2 3 0.3 26
86.422	148.7	0.39	2 7 +0.1 3 0.4 26	87.558	177.2	0.52	1 7 0.0 3 0.5 26
86.463	152.4	0.40	2 5 +0.1 3 0.5 26	87.572	176.0	0.47	1 6 0.0 3 26
86.657	155.5	0.47	2 5 0.0 3 26	87.575	177.1	0.35	1 6 0.0 3 0.4 26
86.300	149.9	0.42	4n 0.4 26-Inch	87.565	176.5	0.42	4n 0.3 26-Inch
Docobo, Costa, 1985: +3.8, +0.02.							
10803	STF 2222		17 47.9 +14 49	10855	A 1883		17 51.6 +45 55
75.501	61.7	2.32	2 4 -0.1 3 2.0 26	82.346	40.4	0.44	2 6 -0.1 3 0.4 26
78.516	62.6	2.17	2 7 0.0 3 1.5 26	85.587	44.1	0.55	2 6 0.0 3 0.4 26
78.526	62.1	2.16	2 5 0.0 3 1.2 26	85.589	50.5	0.49	2 6 0.0 3 0.3 26
77.514	62.1	2.22	3n 1.6 26-Inch	84.507	45.0	0.49	3n 0.4 26-Inch
10806	J 753		17 48.3 +15 47	10846	A 1164		17 51.9 +07 23
78.516	96.6	1.90	2 7 +0.1 3 0.6 26	84.623	49.3	0.28	2 6 +0.1 3 0.4 26
78.526	94.2	1.94	2 5 +0.1 3 0.5 26	84.648	39.5	0.29	2 7 -0.1 3 0.5 26
78.529	96.0	1.87	2 7 +0.1 3 0.7 26	84.713	44.2	0.36	2 6 +0.5 3 0.5 26
78.524	95.6	1.90	3n 0.6 26-Inch	84.661	44.3	0.31	3n 0.5 26-Inch
10814	HU 1182		17 48.6 +35 36	10860	A 234		17 52.6 +25 37
78.551	334.4	0.59	2 7 0.0 3 0.3 26	77.574	56.6	0.20	2 6 0.0 4 0.0 26
78.639	327.5	0.56	1 5 +0.1 3 0.6 26	78.516	59.1	0.14	2 7 0.0 3 0.0 26
78.642	336.3	0.65	2 5 -0.2 3 0.6 26	78.529	55.4	0.18	2 7 +0.1 3 0.3 26
78.644	330.9	0.63	2 6 -0.2 3 0.4 26	78.206	57.0	0.17	3n 0.1 26-Inch
78.619	332.3	0.61	4n 0.5 26-Inch	Closing in and beginning to move more rapidly.			
10815	J 754		17 49.0 +24 52	11006	STT 349		17 53.0 +83 54
76.262	52.6	1.65	2 5 -0.5 3 0.5 26	75.655	43.0	0.32	2 7 +0.1 3 0.3 26
77.574	51.3	1.73	2 6 0.0 4 0.5 26	77.535	44.7	0.33	1 7 +0.1 3 0.3 26
77.593	49.9	1.71	2 6 -0.2 3 0.7 26	77.574	45.5	0.29	1 5 +0.2 4 0.2 26
77.143	51.3	1.70	3n 0.6 26-Inch	76.921	44.4	0.31	3n 0.3 26-Inch
10822	A 2187		17 50.1 +02 14	Heintz, 1962: -14.3, +0.03.			
80.449	320.4	0.39	2 6 0.0 3 0.6 26	10874	STF 2243		17 53.3 +36 06
80.618	320.2	0.44	2 5 -0.1 3 0.3 26	75.501	44.0	1.35	2 4 -0.1 3 0.3 26
80.651	321.7	0.40	2 6 -0.1 3 0.6 26	77.574	42.2	1.21	2 7 +0.1 4 0.0 26
80.573	320.8	0.41	3n 0.5 26-Inch	77.593	41.9	1.22	2 5 0.0 3 0.3 26
10831	FOX 22		17 50.6 +15 17	76.889	42.7	1.26	3n 0.2 26-Inch
80.449	339.9	0.95	1 7 +0.1 3 0.4 26				
80.651	341.3	0.89	2 6 0.0 3 0.4 26				
80.654	340.3	0.86	2 7 0.0 3 0.4 26				
80.585	340.5	0.90	3n 0.4 26-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

145

10871	A 235		17 53.3 +25 00		11001	STF 2267		18 01.6 +40 11
77.574	65.2	0.23	2 6 0.0 4 0.1 26		80.659	261.9	0.67	2 8 +0.1 3 0.1 26
77.593	60.6	0.25	2 6 -0.1 3 0.0 26		80.676	261.3	0.67	2 6 -0.1 3 0.2 26
77.631	64.4	0.25	2 6 0.0 3 0.2 26		81.615	264.9	0.72	2 5 -0.2 3 0.2 26
82.346	71.4	0.28	2 7 +0.1 3 0.2 26		81.631	264.6	0.75	2 6 -0.2 3 0.1 26
85.526	83.1	0.41	2 6 -0.1 3 0.3 26		85.658	265.4	0.64	2 7 -0.4 3 0.2 26
85.543	81.0	0.35	2 5 -0.1 3 26		86.422	264.3	0.66	2 7 0.0 3 0.2 26
					86.463	266.4	0.62	2 6 0.0 3 0.2 26
77.599	63.4	0.24	3n 0.1 26-Inch		86.657	262.0	0.62	2 5 -0.2 3 0.5 26
84.472	78.5	0.35	3n 0.2 26-Inch					
Eggen, 1965: -6.6, -0.03; -3.3, +0.05.					81.145	263.2	0.70	4n 0.1 26-Inch
Baize, 1957: +1.2, -0.04; +1.7, -0.04.					86.300	264.5	0.64	4n 0.3 26-Inch
					10987	BU 1202		18 01.6 +03 32
10912	STF 2244		17 57.1 +00 04		80.651	349.9	0.71	2 6 -0.1 3 0.8 26
					80.654	351.9	0.58	1 7 -0.1 3 0.9 26
85.543	93.3	0.35	2 5 0.0 3 26		80.657	348.7	0.53	1 6 0.0 3 1.0 26
85.559	93.9	0.34	2 7 0.0 3 0.3 26					
85.587	96.2	0.30	2 6 0.0 3 0.2 26		80.654	350.2	0.61	3n 0.9 26-Inch
85.589	93.1	0.31	2 7 0.0 3 0.2 26					
85.570	94.1	0.32	4n 0.2 26-Inch		10990	BU 1125		18 01.8 +01 18
Baize, 1984: -0.3, +0.07.					80.449	94.3	0.41	2 6 0.0 3 3.0 26
A near-simultaneous speckle observation					80.651	92.7	0.61	2 7 0.0 3 2.8 26
confirms the separation.					80.654	87.8	0.49	2 7 0.0 3 3.0 26
					80.657	93.1	0.46	2 6 0.0 3 2.8 26
					80.603	92.0	0.49	4n 2.9 26-Inch
10925	HO 73		17 57.2 +35 47		A difficult pair. Moving more rapidly as			
					it closes in.			
78.642	215.6	1.93	2 5 -0.1 3 0.2 26		11010	BU 1127		18 02.6 +44 14
78.644	216.4	1.98	2 6 -0.2 3 0.2 26					
78.680	215.5	2.01	2 8 +0.2 3 0.2 26		77.593	86.3	0.83	2 5 0.0 3 0.8 26
					78.526	87.6	0.91	2 5 0.0 3 1.8 26
78.655	215.8	1.97	3n 0.2 26-Inch		78.529	85.5	0.97	2 7 0.0 3 1.4 26
					78.216	86.5	0.90	3n 1.3 26-Inch
10916	BU 1299		17 57.5 +10 57		Popovic, 1970: +5.8, -0.16.			
					Predicted separation much too large.			
78.551	42.2	0.15	2 8 0.0 3 0.0 26		11005	STF 2262		18 03.0 -08 11
78.642	48.3	0.17	2 5 -0.2 3 0.0 26					
78.644	43.9	0.20	2 6 -0.3 3 26		78.551	278.4	1.91	2 7 0.0 3 0.6 26
78.680	47.9	0.20	2 8 +0.1 3 0.2 26		78.639	277.3	1.78	3 4 0.0 3 0.5 26
85.658	64.0	0.20	2 7 -0.4 3 26		78.642	278.0	1.79	2 5 0.0 3 0.5 26
86.422	53.1	0.20	2 7 0.0 3 26		78.644	278.2	1.80	3 5 0.0 3 0.6 26
86.660	62.0	0.24	2 8 -0.3 3 0.0 26		81.579	277.1	1.89	2 5 +0.1 3 0.7 26
86.690	54.8	0.23	2 7 0.0 3 0.0 26		81.615	278.5	1.83	2 5 -0.2 3 0.7 26
					81.631	279.4	1.92	2 5 -0.1 3 0.7 26
78.629	45.6	0.18	4n 0.0 26-Inch		81.637	278.2	1.98	2 5 -0.1 3 0.7 26
86.358	58.5	0.22	4n 0.0 26-Inch		86.690	278.1	1.73	2 7 -0.2 3 0.2 26
Baize, 1981: +2.4, -0.05; +3.4, -0.05.					86.712	280.0	1.89	2 5 -0.1 3 0.3 26
					87.555	279.7	1.65	2 6 -0.2 3 0.7 26
					87.558	279.7	1.73	2 7 0.0 3 0.4 26
10961	COU 1003 AP		17 59.5 +29 30					
					78.619	278.0	1.82	4n 0.6 26-Inch
85.559	57.2	0.20	2 7 +0.1 3 26		81.616	278.3	1.90	4n 0.6 26-Inch
85.587	50.5	0.20	2 6 0.0 3 26		87.129	279.4	1.75	4n 0.4 26-Inch
85.589	63.3	0.19	2 7 +0.1 3 26		Wierzbinski, 1959: +1.7, -0.04;			
					+1.1, +0.06.			
85.578	57.0	0.20	3n 26-Inch		+1.6, -0.04.			

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

11012	HO 565		18 03.2 +26 03			11046	STF 2272			18 05.5 +02 30		
81.615	93.9	0.26	2 5	0.0	3 26	77.646	348.0	2.06	1 6	+0.2	3 1.8 26	
81.631	94.1	0.23	2 6	-0.2	3 26	77.574	347.4	2.02	1 6	+0.3	4 2.0 26	
81.637	87.8	0.28	2 5	-0.2	3 26	77.593	345.5	1.97	1 6	0.0	3 2.0 26	
81.645	85.2	0.28	2 4	0.0	3 26	77.631	346.7	1.97	1 5	0.0	3 2.4 26	
85.658	89.5	0.23	2 7	-0.4	3 26	77.697	345.8	1.93	1 4	-0.2	3 2.2 26	
86.422	91.9	0.26	2 7	0.0	3 0.2 26	77.743	344.6	1.91	1 4	+0.5	3 2.0 26	
86.463	93.2	0.26	2 6	+0.1	3 26	77.746	344.9	2.03	1 5	+0.3	3 2.0 26	
86.660	85.6	0.24	2 8	-0.4	3 0.0 26	78.510	337.8	2.10	1 7	0.0	3 1.8 26	
						78.512	339.0	2.03	1 7	-0.1	3 1.8 26	
81.632	90.2	0.26	4n		26-Inch	78.516	338.7	2.09	3 6	0.0	3 2.0 26	
86.301	90.0	0.25	4n	0.1	26-Inch	78.526	339.0	1.91	2 5	+0.1	3 1.8 26	
						78.529	337.0	2.04	2 7	+0.1	3 2.0 26	
						78.551	338.0	1.95	1 7	+0.1	3 2.0 26	
						78.639	336.8	2.03	1 5	-0.1	3 1.8 26	
						79.693	326.2	2.19	1 6	+0.1	3 2.0 26	
11007	A 1165		18 03.3 +04 47			79.715	328.0	2.17	2 6	+0.4	3 2.0 26	
						80.449	323.9	2.25	2 6	0.0	3 1.8 26	
81.631	33.7	1.28	2 6	0.0	3 1.2 26	80.618	322.5	2.14	2 5	-0.1	3 1.8 26	
81.637	33.0	1.25	2 5	0.0	3 1.0 26	80.651	322.1	2.36	2 7	0.0	3 1.8 26	
81.645	36.3	1.06	2 4	-0.1	3 1.5 26	80.654	321.0	2.41	2 7	0.0	3 2.0 26	
81.653	35.8	1.20	2 8	-0.2	3 1.6 26	80.657	323.1	2.23	2 7	0.0	3 2.0 26	
						80.659	323.2	2.28	2 8	+0.1	3 1.8 26	
81.642	34.7	1.20	4n	1.3	26-Inch	80.676	321.5	2.26	2 6	+0.1	3 2.0 26	
						80.700	323.2	2.24	2 5	+0.2	3 1.8 26	
						81.579	316.4	2.26	2 5	+0.1	3 2.2 26	
						81.615	315.2	2.25	2 5	-0.1	3 1.9 26	
						81.631	315.8	2.42	2 6	0.0	3 2.0 26	
11034	STF 2266		18 04.4 +03 29			81.637	315.8	2.21	2 6	0.0	3 2.0 26	
						81.645	315.8	2.36	2 5	-0.1	3 2.0 26	
87.558	182.6	8.63	1 7	0.0	3 3.2 26	81.650	314.8	2.21	2 6	-0.5	3 2.0 26	
87.591	185.2	8.36	1 6	-0.2	3 3.5 26	81.656	314.8	2.40	2 8	-0.5	3 2.0 26	
87.632	184.7	8.62	1 4	-0.2	3 2.8 26	81.692	315.3	2.24	2 5	0.0	3 1.9 26	
						82.346	309.6	2.29	2 8	0.0	3 1.8 26	
87.594	184.2	8.54	3n	3.2	26-Inch	84.623	293.0	2.29	2 7	0.0	3 1.8 26	
						84.648	293.2	2.12	2 7	-0.1	3 2.2 26	
						84.713	292.5	2.16	2 6	+0.1	3 2.0 26	
						84.716	289.6	2.09	2 7	-0.1	3 2.0 26	
						84.719	292.2	2.16	2 6	0.0	3 1.8 26	
11062	ES 641		18 04.8 +54 35			84.724	292.2	2.12	2 4	-0.2	3 2.0 26	
						85.543	286.4	2.21	2 5	-0.1	3 1.8 26	
81.656	67.3	2.15	2 7	0.0	3 0.0 26	85.559	287.7	2.15	2 6	-0.1	3 1.8 26	
82.346	62.8	2.15	2 7	-0.2	3 0.1 26	85.587	288.0	2.03	2 7	0.0	3 2.0 26	
						85.589	286.8	2.04	2 7	-0.1	3 1.8 26	
82.001	65.0	2.15	2n	0.0	26-Inch	85.641	286.7	2.31	2 3	0.0	3 2.0 26	
						85.644	286.5	1.91	2 6	0.0	3 1.8 26	
						86.422	278.5	1.82	2 7	0.0	3 1.8 26	
						86.463	279.5	1.91	2 5	+0.1	3 2.0 26	
						86.657	278.5	1.97	2 5	0.0	3 2.0 26	
11045	STT 534		18 05.0 +21 26			86.660	276.9	1.89	2 7	-0.3	3 2.0 26	
						86.690	276.6	1.81	2 7	-0.5	3 1.8 26	
80.659	271.7	2.25	2 8	+0.1	3 1.8 26	86.709	276.6	1.82	2 6	-0.1	3 1.8 26	
80.676	271.9	2.14	2 6	0.0	3 2.0 26	86.712	275.4	1.88	2 5	0.0	3 2.0 26	
80.700	271.4	2.32	2 5	+0.5	3 1.6 26	86.747	275.7	1.83	2 7	0.0	3 2.0 26	
80.720	271.1	2.26	2 7	+0.4	3 2.0 26	87.555	265.7	1.69	2 5	-0.2	3 1.8 26	
						87.558	266.5	1.72	2 7	+0.1	3 1.8 26	
80.689	271.5	2.24	4n	1.8	26-Inch	87.572	265.1	1.68	2 5	-0.1	3 1.9 26	
						87.575	267.6	1.52	2 7	0.0	3 2.0 26	
						87.591	265.1	1.59	2 6	-0.3	3 1.8 26	
						87.632	266.7	1.67	2 5	-0.2	3 1.8 26	
						87.635	265.9	1.69	2 6	+0.1	3 1.8 26	
						87.667	265.2	1.61	2 5	0.0	3 1.8 26	
11073	HU 1290		18 05.4 +62 16			77.646	346.1	1.98	7n	2.1	26-Inch	
						78.540	338.0	2.02	7n	1.9	26-Inch	
81.650	49.5	0.17	2 7	+0.2	3 26	79.709	327.2	2.18	3n	2.0	26-Inch	
81.653	52.6	0.21	2 7	+0.1	3 0.3 26	80.633	322.6	2.27	8n	1.9	26-Inch	
81.656	46.1	0.23	2 8	0.0	4 26	81.638	315.5	2.29	8n	2.0	26-Inch	
						82.346	309.6	2.29	1n	1.8	26-Inch	
81.653	49.4	0.20	3n	0.3	26-Inch							

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

147

84.690	292.1	2.16	6n	2.0	26-Inch	11080	STT 524	18 07.5 +19 40
85.594	287.0	2.11	6n	1.9	26-Inch			
86.632	277.2	1.87	8n	1.9	26-Inch	81.653	221.6	0.22 3 7 +0.1 5 1.0 26
87.598	266.0	1.65	8n	1.8	26-Inch	81.656	221.3	0.24 2 7 +0.1 4 1.2 26
						81.692	222.8	0.29 3 5 0.0 3 1.3 26
Heintz, 1973:	+1.4,	-0.01;	+1.5,	-0.05;		81.697	219.4	0.24 2 5 -0.1 3 1.5 26
	+0.5,	+0.01;	+3.1,	+0.02;				
	+3.2,	-0.01;	+2.4,	+0.01;		81.674	221.3	0.25 4n 1.2 26-Inch
	+2.4,	-0.10;	+5.1,	+0.08;				
	+5.8,	+0.01;	+6.2,	-0.07.		Heintz, 1974:	+1.7,	+0.04.
The growing angular residual is surprising in a supposedly "definitive" orbit.						Baize, 1985:	-6.9,	+0.01.
11060	STT 341		18 05.8	+21 27				
80.659	86.5	0.24	2 8	0.0 3 1.0 26		11083	BU 826	18 07.7 +09 46
80.676	87.9	0.26	2 7	0.0 3 1.2 26		77.631	143.0	0.94 2 5 +0.1 3 0.2 26
80.700	85.3	0.29	2 5	+0.4 3 0.6 26		78.510	140.5	0.81 2 7 0.0 3 0.0 26
80.720	86.9	0.29	2 7	+0.4 3 0.8 26		78.512	143.1	0.81 2 7 0.0 3 0.1 26
80.689	86.6	0.27	4n	0.9 26-Inch		78.218	142.2	0.85 3n 0.1 26-Inch
Heintz, 1982:	-1.3,	0.00.						
11067	HO 79		18 06.2	+33 26		11094	ROE 97	18 08.5 +10 14
81.631	25.0	0.24	2 6	0.0 3 26		77.631	150.8	0.98 1 5 +0.2 3 0.4 26
81.637	24.0	0.24	2 6	+0.2 3 26		78.510	148.5	0.87 2 6 +0.1 3 0.2 26
81.653	23.3	0.34	2 8	-0.1 3 0.0 26		78.512	149.9	0.94 2 7 0.0 3 0.5 26
81.656	25.0	0.29	2 8	-0.1 3 0.2 26		78.218	149.7	0.93 3n 0.4 26-Inch
81.644	24.3	0.28	4n	0.1 26-Inch				
11071	HU 1186		18 06.3	+38 24		11098	HU 314	18 08.7 +18 38
81.645	101.5	0.45	2 5	+0.1 3 0.2 26		82.346	95.3	0.28 2 8 +0.1 3 0.3 26
81.650	99.8	0.48	2 6	0.0 3 0.2 26		85.587	98.4	0.23 2 7 0.0 3 0.2 26
81.653	105.2	0.43	2 7	0.0 3 0.3 26		85.589	97.3	0.22 2 7 0.0 3 0.2 26
81.656	102.6	0.48	2 8	-0.2 3 0.2 26		84.507	97.0	0.24 3n 0.2 26-Inch
81.651	102.3	0.46	4n	0.2 26-Inch				
Heintz, 1965:	+2.5,	+0.11.						
11077	AC 15		18 07.0	+30 34		11128	HU 674	18 09.6 +50 24
77.689	357.9	1.64	2 4	-0.1 3 3.0 26		87.591	224.9	0.71 2 5 -0.1 3 0.4 26
78.512	357.7	1.57	1 7	+0.1 3 2.5 26		87.632	224.3	0.63 2 4 -0.1 3 0.4 26
78.516	358.4	1.39	2 7	+0.1 3 2.6 26		87.667	222.5	0.66 2 5 -0.3 3 0.5 26
78.526	356.7	1.41	2 4	0.0 3 2.8 26		87.630	223.9	0.67 3n 0.4 26-Inch
82.346	8.0	1.39	2 8	+0.1 3 3.3 26				
84.719	10.6	1.21	2 5	+0.2 3 3.0 26				
84.724	8.5	1.28	2 6	+0.1 3 3.3 26				
87.632	17.5	1.15	2 4	-0.1 3 2.0 26				
87.635	13.0	1.14	2 6	0.0 3 3.0 26				
87.667	11.9	1.19	2 5	-0.1 3 3.0 26				
78.311	357.7	1.50	4n	2.7 26-Inch		11110	STF 2283	18 09.6 +06 09
83.930	9.0	1.29	3n	3.2 26-Inch		85.543	65.3	0.64 2 5 -0.2 3 0.2 26
87.645	14.1	1.16	3n	2.7 26-Inch		85.587	66.4	0.57 2 7 +0.1 3 0.7 26
Heintz, 1972:	+0.8,	0.00;	+1.8,	-0.05;		85.589	66.5	0.61 2 7 +0.1 3 0.5 26
	-1.7,	0.00.				85.573	66.1	0.61 3n 0.5 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

11111	STF 2281		18 09.6 +04 00	11132	ROE 110		18 10.9 +12 51
80.449	340.0	0.27	2 7 0.0 3 0.8 26	85.543	142.8	3.28	2 5 0.0 3 3.2 26
80.618	326.3	0.26	2 6 -0.1 3 0.3 26	86.422	135.1	3.39	2 6 +0.2 3 4.0 26
80.651	333.4	0.28	2 7 0.0 3 0.5 26	86.660	135.1	3.62	2 7 -0.2 3 3.5 26
80.593	333.9	0.28	3 6 +0.1 3 0.8 26				
82.346	327.7	0.34	2 6 +0.1 3 0.6 26	86.208	137.7	3.43	3n 3.6 26-Inch
84.623	320.7	0.28	2 7 +0.1 3 0.8 26				
84.648	324.5	0.33	2 6 0.0 3 0.6 26				
84.713	325.0	0.34	2 6 +0.5 3 0.8 26	11141	HU 317		18 11.3 +17 13
84.716	322.6	0.32	2 7 0.0 3 1.0 26				
86.422	320.2	0.32	2 6 +0.1 3 0.8 26	78.516	21.5	1.60	2 6 +0.2 3 0.0 26
86.660	319.2	0.42	2 7 -0.3 3 0.8 26	78.529	24.8	1.57	2 7 +0.1 3 0.0 26
86.690	320.3	0.36	2 7 -0.4 3 1.0 26	78.551	24.8	1.51	2 8 +0.2 3 0.2 26
86.709	314.2	0.30	2 5 -0.1 3 1.0 26				
86.712	319.2	0.33	2 5 0.0 3 1.0 26	78.532	23.7	1.56	3n 0.1 26-Inch
87.558	319.0	0.35	2 7 +0.1 3 0.8 26				
87.572	319.9	0.33	2 5 -0.1 3 0.4 26				
87.575	315.9	0.35	2 6 0.0 3 0.8 26				
87.591	316.3	0.33	2 6 -0.3 3 1.0 26		BRT 1293		18 11.5 +12 47
80.593	333.4	0.27	4n 0.6 26-Inch	85.644	77.5	5.37	2 6 0.0 3 2.8 26
84.209	324.1	0.32	5n 0.8 26-Inch	85.658	78.5	5.61	2 7 -0.2 3 2.5 26
86.639	318.6	0.35	5n 0.9 26-Inch				
87.574	317.8	0.34	4n 0.8 26-Inch	85.651	78.0	5.49	2n 2.6 26-Inch
Heintz, 1984: +2.0, -0.08; +1.7, -0.06; +1.6, -0.05; +2.7, -0.06. Slightly better than Valbousquet's orbit.				11153	A 353		18 12.5 +04 15
11123	STF 2289		18 10.2 +16 28	79.693	17.3	1.77	1 6 0.0 3 1.3 26
77.593	224.4	1.19	2 5 +0.1 3 0.6 26	80.449	13.7	1.66	1 5 0.0 3 1.5 26
77.689	226.1	1.30	2 3 0.0 3 0.8 26	80.651	16.4	1.70	2 7 -0.1 3 1.4 26
78.516	224.4	1.18	2 7 +0.1 3 0.8 26	80.264	15.8	1.71	3n 1.4 26-Inch
78.639	224.9	1.21	2 5 0.0 3 1.2 26				
78.109	225.0	1.22	4n 0.8 26-Inch	11194	HU 318		18 14.7 +23 35
Hopmann, 1964: +4.3, -0.01.				81.615	163.2	0.58	2 5 0.0 3 0.5 26
				81.656	165.3	0.63	2 7 +0.1 4 0.5 26
				82.346	159.5	0.64	2 7 +0.2 3 0.3 26
11118	BU 638 BC		18 10.3 +02 35	81.872	162.7	0.64	3n 0.4 26-Inch
81.631	6.9	1.87	1 5 +0.1 3 0.5 26				
81.637	7.1	1.75	1 6 +0.2 3 0.6 26	11223	HU 319		18 16.5 +22 49
81.653	5.5	1.92	1 7 +0.2 3 0.5 26	79.693	102.0	0.39	2 5 +0.1 3 0.5 26
81.640	6.5	1.85	3n 0.5 26-Inch	79.715	103.5	0.31	2 6 +0.2 3 0.4 26
11131	HO 81		18 10.4 +32 21	79.718	102.9	0.31	2 7 +0.4 3 0.4 26
85.658	218.7	3.21	2 7 -0.3 3 3.0 26	85.658	97.4	0.28	2 7 -0.2 3 0.2 26
86.657	219.8	2.99	2 5 -0.2 3 3.0 26	86.660	109.0	0.31	2 7 -0.2 3 0.3 26
86.660	217.2	3.06	2 7 -0.1 3 2.0 26	86.690	106.7	0.30	2 6 0.0 3 0.4 26
86.690	218.9	3.09	2 7 -0.1 3 2.8 26	79.709	102.8	0.34	3n 0.4 26-Inch
86.416	218.6	3.09	4n 2.7 26-Inch	86.336	104.4	0.30	3n 0.3 26-Inch
11119	STF 2286		18 10.4 +00 32	11234	A 241		18 17.2 +26 40
81.615	313.6	2.96	2 5 -0.1 3 2.4 26	81.579	289.2	0.73	2 5 +0.1 3 26
81.631	315.7	2.98	2 6 +0.1 3 1.5 26	81.656	289.6	0.67	2 7 +0.1 4 0.0 26
81.637	314.2	3.06	2 5 +0.2 3 1.5 26	82.346	290.1	0.69	2 5 +0.2 3 0.2 26
81.628	314.5	3.00	3n 1.8 26-Inch	81.860	289.6	0.70	3n 0.1 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

149

11235	J 759	18 17.3 +20 25	11276	ES 547	18 20.9 +32 20
77.535	83.9 2.48	2 7 -0.1 3 0.1 26	80.449	65.9 1.78	2 5 0.0 3 0.0 26
77.593	83.5 2.56	2 5 0.0 3 0.2 26	80.651	65.8 1.77	2 6 -0.1 3 0.2 26
77.631	84.0 2.47	2 5 +0.1 3 0.1 26	80.654	65.6 1.68	2 7 -0.1 3 0.0 26
77.586	83.8 2.50	3n 0.1 26-Inch	80.585	65.8 1.74	3n 0.1 26-Inch
11315	HU 929	18 19.6 +76 36	11280	STF 2312	18 21.1 +28 20
75.655	111.4 1.72	2 6 -0.1 3 1.5 26	81.579	340.2 1.64	2 5 +0.1 3 1.0 26
76.689	112.2 1.73	2 6 +0.1 3 1.2 26	81.615	340.5 1.59	2 5 0.0 3 1.5 26
77.535	113.7 1.81	2 6 -0.2 3 1.6 26	81.631	342.3 1.63	2 6 +0.1 3 1.8 26
76.626	112.4 1.75	3n 1.4 26-Inch	81 608	341.0 1.62	3n 1.1 26-Inch
11260	HU 197	18 19.7 +10 17		COU 418	18 21.7 +23 56
78.526	144.0 0.26	2 5 0.0 3 0.8 26	85.587	82.7 0.19	2 7 0.0 4 26
78.529	144.8 0.28	2 8 +0.1 3 0.6 26	85.589	79.8 0.18	2 7 0.0 3 26
78.551	143.6 0.23	2 8 -0.1 3 0.8 26	85.658	74.6 0.18	2 7 -0.2 3 26
78.639	148.0 0.23	3 4 0.0 3 0.6 26	85.611	79.0 0.18	3n 26-Inch
84.623	122.5 0.24	2 7 0.0 3 0.6 26			
84.648	119.9 0.30	2 6 +0.1 3 0.6 26	11287	BU 641	18 21.8 +21 31
84.713	115.7 0.33	2 6 +0.4 3 0.7 26	87.591	344.9 0.81	2 5 -0.1 3 1.5 26
84.716	117.6 0.30	2 6 +0.2 3 1.0 26	87.635	345.5 0.84	2 6 -0.2 3 1.5 26
87.558	116.8 0.39	2 7 0.0 3 1.0 26	87.667	345.2 0.81	2 5 -0.2 3 1.5 26
87.572	119.1 0.35	2 6 0.0 3 0.7 26	87.670	347.5 0.88	4 5 +0.1 3 1.2 26
87.670	118.6 0.31	2 6 +0.2 3 1.0 26	87.641	345.8 0.83	4n 1.4 26-Inch
78.561	145.1 0.25	4n 0.7 26-Inch			
84.675	118.9 0.29	4n 0.7 26-Inch			
87.600	118.2 0.35	3n 0.9 26-Inch			
Baize, 1972: -2.6, -0.01; -0.6, -0.01; +10.6, +0.03.			11291	AG 222	18 22.2 +14 13
	COU 202	18 20.5 +20 55	80.659	145.8 1.52	2 8 0.0 3 0.1 26
78.512	266.1 0.22	2 7 0.0 3 0.1 26	80.676	146.4 1.47	2 6 -0.1 3 0.3 26
78.516	264.8 0.23	2 7 0.0 3 0.0 26	80.700	147.0 1.61	2 5 +0.2 3 0.2 26
78.529	268.4 0.24	2 7 0.0 3 0.2 26	80.678	147.0 1.61	3n 0.2 26-Inch
85.543	274.9 0.28	2 5 -0.1 3 26			
85.559	267.8 0.24	2 7 0.0 3 26	11329	HU 1292	18 23.2 +61 39
85.587	275.9 0.22	2 7 0.0 3 26	76.689	150.0 0.17	3 6 +0.2 3 0.0 26
78.519	266.4 0.23	3n 0.1 26-Inch	77.574	147.4 0.23	1 5 -0.1 4 0.0 26
85.563	272.9 0.25	3n 26-Inch	77.132	148.7 0.20	2n 0.0 26-Inch
Slow direct motion.					
11311	STF 353	18 20.8 +71 20	11309	STF 2314	18 23.5 +23 27
75.655	289.8 0.30	2 6 -0.2 3 1.2 26	85.543	330.8 2.70	2 5 0.0 3 0.8 26
76.689	281.5 0.26	3 6 0.0 3 1.5 26	85.644	329.3 2.82	2 5 -0.1 3 1.0 26
77.535	286.7 0.29	4 7 -0.3 3 1.5 26	85.658	328.4 2.58	2 6 -0.1 3 1.8 26
77.574	283.1 0.32	2 6 -0.1 4 1.8 26	85.615	329.5 2.70	3n 1.2 26-Inch
87.572	281.0 0.39	2 7 -0.2 3 1.7 26			
87.575	278.5 0.41	2 5 0.0 3 1.4 26	11319	A 244	18 24.1 +28 18
87.591	280.2 0.32	4 5 -0.3 3 1.5 26	81.615	284.0 0.36	2 5 0.0 3 26
76.863	285.3 0.29	4n 1.5 26-Inch	81.631	275.7 0.38	2 5 +0.1 3 0.5 26
87.579	279.9 0.37	3n 1.5 26-Inch	81.653	279.9 0.43	2 7 +0.1 3 0.3 26
			81.656	275.0 0.43	2 7 +0.1 4 0.5 26
Olevic, 1975: +15.8, +0.07; +29.0, +0.15. Motion much slower than predicted.			81.639	278.6 0.40	4n 0.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

11334	STF 2315	18 25.0 +27 23	11366	BU 464	18 27.6 +06 33
79.693	127.1 0.61	2 6 0.0 3 0.8 26	81.645	104.5 1.08	2 5 0.0 3 0.8 26
79.715	131.4 0.65	2 5 +0.1 3 0.7 26	81.656	106.7 1.10	2 6 +0.1 4 1.2 26
79.718	129.5 0.50	2 7 +0.3 3 1.0 26	81.697	104.9 1.19	2 5 0.0 3 1.8 26
79.709	129.3 0.59	3n 0.8 26-Inch	81.730	106.1 1.02	2 3 +0.1 3 0.8 26
Heintz, 1960: -0.1, -0.10.			81.682	105.6 1.10	4n 0.9 26-Inch
11324	AC 11	18 25.0 -01 35	11373	STF 2320	18 27.7 +24 42
78.644	357.0 0.73	1 4 -0.2 3 0.2 26	86.709	0.5 1.09	1 6 -0.2 3 1.3 26
78.680	356.6 0.77	1 8 0.0 3 0.2 26	86.712	1.1 1.26	1 5 -0.2 3 1.2 26
78.737	354.8 0.76	1 5 +0.3 3 0.4 26	86.747	5.6 1.32	2 6 +0.2 3 1.6 26
86.422	358.3 0.86	1 6 0.0 3 0.2 26	86.723	2.4 1.22	3n 1.4 26-Inch
86.463	359.9 0.80	1 5 0.0 3 0.4 26	11385	BU 320	18 28.7 +16 14
86.657	355.9 0.87	1 5 +0.2 3 0.2 26	81.645	142.6 1.98	2 5 0.0 3 0.3 26
86.660	355.5 0.87	1 7 -0.2 3 0.4 26	81.697	145.0 2.14	2 5 0.0 3 0.3 26
78.687	356.1 0.75	3n 0.3 26-Inch	81.730	144.5 2.15	2 4 +0.1 3 0.4 26
86.550	357.4 0.85	4n 0.3 26-Inch	81.691	144.0 2.09	3n 0.3 26-Inch
Heintz, 1958: -0.2, -0.03; +1.5, +0.06.			11387	A 581	18 29.1 +04 04
11343	BU 134	18 25.3 +46 53	86.709	112.3 0.32	2 5 -0.1 3 0.5 26
76.703	133.2 1.18	2 5 0.0 3 2.0 26	86.712	119.9 0.34	2 5 -0.2 3 0.5 26
77.593	126.8 1.02	3 5 0.0 3 2.4 26	87.558	122.4 0.38	2 6 0.0 3 0.8 26
77.631	126.6 1.05	4 5 0.0 3 2.6 26	87.572	126.2 0.31	2 6 0.0 3 0.5 26
77.309	128.9 1.08	3n 2.3 26-Inch	87.138	120.2 0.34	4n 0.6 26-Inch
11338	HO 85	18 25.3 +28 05	11398	A 245	18 29.6 +26 47
87.558	197.6 4.93	2 7 0.0 3 4.0 26	85.589	1.1 3.22	2 7 0.0 3 3.2 26
87.572	195.7 4.87	2 7 0.0 3 4.0 26	85.644	2.4 3.23	2 5 -0.1 3 3.5 26
87.635	200.0 4.69	2 6 -0.1 3 3.5 26	85.658	0.6 3.22	2 6 -0.1 3 3.8 26
87.588	197.8 4.83	3n 3.8 26-Inch	85.630	1.4 3.22	3n 3.5 26-Inch
11339	BU 1203	18 26.1 +00 46	No measures since 1927. Unchanged.		
81.730	138.7 0.37	2 3 -0.1 3 0.5 26	11409	A 246	18 30.5 +25 19
81.733	141.8 0.40	2 4 0.0 3 0.5 26	78.512	164.1 1.40	1 7 -0.1 3 1.8 26
81.735	141.9 0.38	2 6 +0.2 3 0.6 26	78.516	164.1 1.46	1 6 0.0 3 1.0 26
81.733	140.8 0.38	3n 0.5 26-Inch	78.642	163.2 1.45	2 6 -0.4 3 1.8 26
11346	A 580	18 26.5 +07 41	79.693	164.5 1.43	1 4 0.0 3 1.0 26
86.463	322.2 4.37	2 5 0.0 3 2.6 26	79.718	164.5 1.39	1 6 0.0 3 1.0 26
86.660	323.0 4.56	2 7 -0.2 3 2.2 26	79.016	164.1 1.43	5n 1.3 26-Inch
86.690	324.3 4.23	2 6 -0.1 3 2.0 26	11425	A 248	18 31.2 +25 16
86.604	323.2 4.39	3n 2.3 26-Inch	78.642	34.5 0.43	2 6 -0.3 3 0.2 26
11349	STI 350	18 26.9 +06 26	78.680	34.4 0.47	2 7 0.0 3 0.6 26
81.645	165.8 1.95	1 5 +0.2 3 1.5 26	79.718	36.9 0.44	2 6 +0.1 3 0.4 26
81.656	167.9 1.85	1 7 0.0 4 1.0 26	79.013	35.3 0.45	3n 0.4 26-Inch
81.697	166.5 1.69	1 5 -0.1 3 1.2 26			
81.730	166.3 1.90	2 3 0.0 3 1.4 26			
81.682	166.6 1.85	4n 1.3 26-Inch			

151

TABLE 2 (Cont.)

KUI 86						18 31.3 +65 28						WAK 21 CD					
85.589	39.3	24.86	2 7	0.0 3	4.0 26	77.746	76.9	0.22	2 5	+0.2 3	0.0 26	77.746	76.9	0.22	2 5	+0.2 3	0.0 26
85.644	40.0	24.87	2 7	0.0 3	3.5 26	78.516	80.7	0.23	2 6	+0.1 3	0.3 26	78.516	80.7	0.23	2 6	+0.1 3	0.3 26
						78.529	79.4	0.18	2 7	+0.1 3	0.2 26	78.529	79.4	0.18	2 7	+0.1 3	0.2 26
85.616	39.6	24.86	2n	3.8	26-Inch	78.551	75.2	0.21	2 8	+0.1 3	0.3 26	78.551	75.2	0.21	2 8	+0.1 3	0.3 26
						84.623	85.6	0.26	2 8	+0.2 3	0.3 26	84.623	85.6	0.26	2 8	+0.2 3	0.3 26
						84.648	80.3	0.26	2 6	+0.2 3	0.4 26	84.648	80.3	0.26	2 6	+0.2 3	0.4 26
						84.716	82.0	0.28	2 6	0.0 3	0.3 26	84.716	82.0	0.28	2 6	0.0 3	0.3 26
This is the second measure. Optical pair.																	
11420	STF 2329		18 31.5 +06 27			78.336	78.0	0.21	4n	0.2	26-Inch	78.336	78.0	0.21	4n	0.2	26-Inch
						84.662	82.6	0.27	3n	0.3	26-Inch	84.662	82.6	0.27	3n	0.3	26-Inch
77.574	44.7	4.23	2 5	0.0 4	0.8 26	Slow direct motion.											
78.644	44.5	4.34	2 4	-0.2 3	1.4 26												
78.737	45.0	4.24	2 5	+0.3 3	1.5 26												
78.318	44.7	4.27	3n	1.2	26-Inch	11468	A 1377		18 34.0 +52 21								
						86.422	101.6	0.29	2 6	0.0 3	0.0 26	86.422	101.6	0.29	2 6	0.0 3	0.0 26
11426	HU 244		18 31.6 +12 02			86.463	100.2	0.28	2 6	0.0 3	0.0 26	86.463	100.2	0.28	2 6	0.0 3	0.0 26
						86.660	103.1	0.34	2 7	-0.2 3	26	86.660	103.1	0.34	2 7	-0.2 3	26
81.615	261.9	1.03	2 4	+0.1 3	3.0 26	86.690	103.4	0.28	2 7	-0.1 3	0.0 26	86.690	103.4	0.28	2 7	-0.1 3	0.0 26
81.631	260.0	1.33	2 6	+0.1 3	3.0 26												
81.637	259.7	1.37	2 5	0.0 3	2.5 26	86.559	102.1	0.30	4n	0.0	26-Inch	86.559	102.1	0.30	4n	0.0	26-Inch
81.653	260.0	1.29	2 7	0.0 3	2.2 26	Scardia, 1984: +0.6, +0.03.											
81.634	260.4	1.26	4n	2.7	26-Inch												

11484	STT 357		18 36.0 +11 44		11530	HO 87		18 38.7 +16 37
80.449	99.9	0.28	2 5 +0.2 3 0.0 26		85.587	35.9	0.23	2 7 -0.1 4 0.3 26
80.651	103.7	0.31	2 7 -0.1 3 0.1 26		85.589	41.0	0.22	2 6 0.0 3 0.4 26
80.585	102.0	0.34	2 5 -0.1 3 0.0 26		85.644	39.3	0.24	2 6 0.0 3 26
84.716	277.1	0.31	2 6 +0.1 3 0.2 26					
84.719	283.4	0.30	2 6 0.0 3 0.2 26		85.607	38.7	0.23	3n 0.4 26-Inch
84.721	279.1	0.31	2 5 +0.2 3 0.3 26					
84.724	281.1	0.31	2 6 -0.2 3 0.2 26		Baize, 1986: -3.3, +0.01.			
86.709	100.1	0.33	2 6 0.0 3 0.0 26		Scardia, 1986: -0.9, -0.03.			
86.712	282.6	0.34	2 6 -0.1 3 0.2 26					
86.747	100.1	0.39	2 6 +0.2 3 0.2 26					
86.767	96.1	0.35	2 6 +0.2 3 0.0 26		11562	A 1380		18 39.1 +56 00
					77.631	196.5	0.93	1 6 +0.1 3 0.1 26
80.585	102.0	0.31	3n 0.0 26-Inch		78.529	197.8	0.88	2 7 +0.2 3 0.6 26
84.720	280.2	0.31	4n 0.2 26-Inch		78.639	196.8	0.82	1 5 -0.1 3 0.6 26
86.734	99.7	0.35	4n 0.1 26-Inch					
					78.266	197.0	0.88	3n 0.3 26-Inch
Valbousquet, 1981: -0.7, -0.04; +1.7, -0.04; +3.1, -0.01.					11570	ES 787		18 39.9 +51 06
					86.660	38.2	8.10	2 5 -0.1 3 1.2 26
11504	STF 2349		18 36.6 +33 28		86.690	38.0	8.06	2 6 0.0 3 1.4 26
					86.709	37.6	8.32	2 6 0.0 3 1.5 26
87.575	203.7	7.44	2 5 0.0 3 3.5 26					
87.635	204.3	7.22	2 5 -0.1 3 4.0 26		86.686	37.9	8.16	3n 1.4 26-Inch
87.667	204.2	7.29	2 5 -0.2 3 4.0 26					
					11565	HU 1190		18 39.9 +38 07
87.626	204.1	7.32	3n 3.8 26-Inch		81.645	167.7	1.78	2 5 0.0 3 0.1 26
					81.653	167.7	1.67	2 7 -0.1 3 0.1 26
11502	HU 247		18 37.0 +10 16		81.733	169.7	1.69	2 4 +0.2 3 26
80.676	14.7	0.41	1 6 -0.2 3 0.3 26		81.677	168.4	1.71	3n 0.1 26-Inch
80.700	16.8	0.46	2 5 +0.1 3 0.2 26					
80.720	18.9	0.49	2 5 +0.1 3 0.2 26					
80.699	16.8	0.45	3n 0.2 26-Inch					
11568	STF 2384		18 38.4 +67 08					
81.645	310.4	0.43	2 5 0.0 3 0.4 26					
81.650	308.5	0.41	2 7 -0.2 3 0.4 26					
81.653	309.0	0.45	2 7 0.0 3 0.8 26					
81.656	307.9	0.50	2 7 0.0 4 0.4 26					
86.422	309.1	0.31	2 6 0.0 3 0.4 26					
86.463	310.4	0.34	2 5 0.0 3 26					
86.660	306.5	0.36	2 5 -0.1 3 26					
86.690	312.6	0.30	2 6 -0.1 3 0.4 26					
81.651	309.0	0.45	4n 0.5 26-Inch					
86.559	308.0	0.33	4n 0.4 26-Inch					
Heintz, 1975: -2.7, -0.13; -4.6, -0.13.								
					11623	A 253		18 43.8 +31 41

11617	STF 2369	18 43.9 +02 37	11678	MLB 137	18 45.8 +56 45
86.712	68.1 0.37	2 5 0.0 3 0.3 26	76.703	348.3 1.81	1 5 0.0 3 0.0 26
87.558	73.0 0.47	2 6 0.0 3 26	78.639	348.5 2.04	2 5 0.0 3 0.0 26
87.635	71.2 0.40	2 5 0.0 3 26	78.642	344.3 1.97	1 6 -0.1 3 0.3 26
87.667	65.4 0.46	2 5 -0.2 3 26	77.995	347.0 1.94	3n 0.1 26-Inch
87.393	69.4 0.42	4n 0.3 26-Inch	11692	HU 937	18 46.2 +64 12
11614	A 859	18 43.9 -00 13	81.645	322.8 0.72	2 5 0.0 3 0.8 26
80.676	8.3 0.26	1 6 -0.2 3 0.4 26	81.650	321.1 0.82	2 7 -0.2 3 0.8 26
80.700	11.4 0.28	2 5 +0.1 3 0.4 26	81.653	321.8 0.78	2 7 0.0 3 0.6 26
80.720	11.3 0.25	1 7 -0.1 3 0.5 26	81.656	320.8 0.81	2 6 -0.1 4 0.8 26
80.699	10.3 0.26	3n 0.4 26-Inch	81.651	321.6 0.78	4n 0.8 26-Inch
11619	A 2388	18 44.0 +03 21	Baize, 1980: -6.7, +0.26. Recent observations show a much larger separation than predicted.		
78.680	105.4 0.23	2 7 +0.1 3 0.2 26	11686	HU 756	18 46.6 +51 42
80.676	105.1 0.19	2 6 -0.2 3 0.5 26	81.653	258.0 0.95	2 7 +0.1 3 2.7 26
80.720	109.6 0.23	2 6 0.0 3 0.5 26	85.587	263.0 1.08	2 7 -0.1 4 2.0 26
80.025	106.7 0.23	3n 0.4 26-Inch	85.644	268.9 0.99	2 6 0.0 3 2.2 26
11635	STF 2382 AB	18 44.3 +39 40	84.295	263.3 1.01	3n 2.3 26-Inch
80.651	356.0 2.69	2 7 -0.2 3 1.0 26	11680	HU 1191	18 46.6 +38 22
80.654	355.7 2.55	2 6 -0.1 3 1.0 26	78.512	271.3 0.22	2 6 0.0 3 0.0 26
80.657	356.1 2.56	2 8 -0.2 3 0.6 26	78.516	271.4 0.24	2 6 0.0 3 0.4 26
80.659	355.6 2.66	2 8 +0.2 3 0.7 26	78.529	269.8 0.22	2 6 +0.2 3 0.4 26
80.655	355.8 2.62	4n 0.8 26-Inch	78.551	272.1 0.17	2 8 +0.1 3 0.4 26
Guntzel-Lingner, 1956: +0.8, 0.06.			80.651	221.2 0.19	2 7 0.0 3 26
STF 2383 CD			80.654	221.4 0.15	2 7 0.0 3 26
80.651	93.0 2.42	2 7 0.0 3 0.3 26	80.657	216.7 0.15	2 7 -0.4 3 0.0 26
80.654	90.1 2.25	2 5 0.0 3 0.3 26	81.650	181.4 0.09	2 7 -0.2 3 26
80.657	91.7 2.24	2 8 -0.2 3 0.3 26	78.527	271.2 0.21	4n 0.3 26-Inch
80.659	92.2 2.33	2 7 +0.1 3 0.3 26	80.654	219.8 0.16	3n 0.0 26-Inch
80.655	91.8 2.33	4n 0.3 26-Inch	81.650	181.4 0.09	1n 26-Inch
Costa, Docobo, 1984: +0.9, +0.04. Solution bound to be affected by the recently discovered speckle companion.			Morel, 1969: -7.9, -0.03; -20.4, +0.01; +3.3, 0.00.		
11628	HU 325	18 44.3 +20 52	11683	HU 584	18 47.5 +15 37
81.631	14.5 0.42	2 6 0.0 3 0.5 26	79.715	9.5 0.44	1 5 0.0 3 0.2 26
84.724	9.0 0.29	2 6 -0.2 3 0.6 26	79.718	13.2 0.34	1 6 +0.1 3 0.2 26
85.559	3.0 0.37	2 6 -0.2 3 0.3 26	80.449	14.1 0.34	2 5 0.0 3 0.0 26
83.971	8.8 0.36	3n 0.5 26-Inch	79.960	12.3 0.37	3n 0.1 26-Inch
11640	STF 2375 APXBQ	18 45.5 +05 30	HEI 72 18 47.7 +49 05		
77.746	118.3 2.36	2 4 +0.1 3 0.6 26	86.422	214.6 0.41	2 6 0.0 3 1.6 26
78.721	119.0 2.45	2 6 0.0 3 0.6 26	86.690	216.5 0.34	2 6 0.0 3 1.5 26
80.654	118.8 2.50	2 5 -0.2 3 0.6 26	86.709	215.6 0.54	2 6 0.0 3 1.5 26
79.040	118.7 2.50	3n 0.6 26-Inch	86.712	209.5 0.45	2 6 0.0 3 1.6 26
			86.633	214.0 0.44	4n 1.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

11725	HU 327	18 49.8 +21 24	11790	STF 2413	18 53.4 +03 23								
84.623	77.6	0.23	2 7	0.0	3 0.0	26	86.709	197.8	10.11	1 6	0.0	3 0.3	26
84.713	72.0	0.31	2 6	+0.4	3	26	87.558	198.2	9.96	2 7	0.0	3 0.8	26
84.716	73.2	0.24	2 7	+0.1	3 0.2	26	87.572	198.9	10.00	1 6	0.0	3 0.5	26
84.684	74.3	0.26	3n	0.1	26-Inch		87.280	198.3	10.02	3n	0.5	26-Inch	
This pair was neglected 1921-1954. Slow retrograde motion.													
11753	HU 1192	18 50.1 +40 02	11815	HU 1294	18 54.3 +32 15								
81.637	45.4	2.56	2 5	-0.2	3 0.8	26	77.631	120.7	1.63	2 6	-0.1	3 1.5	26
81.645	46.6	2.59	2 5	0.0	3 0.8	26	78.512	115.8	1.68	2 7	0.0	3 1.4	26
81.650	44.0	2.45	2 7	-0.1	3 0.7	26	78.516	117.4	1.52	2 6	0.0	3 1.4	26
81.644	45.3	2.53	3n	0.8	26-Inch		78.220	118.0	1.61	3n	1.4	26-Inch	
11735	BU 265	18 50.3 +11 31	11816	STF 2415	18 54.5 +20 37								
82.346	228.5	1.53	2 4	-0.2	3 1.5	26	80.766	292.3	1.95	2 6	+0.1	3 1.6	26
85.543	232.9	1.40	2 5	-0.3	3 1.3	26	80.769	291.3	1.91	2 7	+0.3	3 1.6	26
85.559	231.0	1.33	2 7	+0.1	3 1.3	26	80.772	293.9	2.05	2 5	+0.1	3 1.7	26
84.483	230.8	1.42	3n	1.4	26-Inch		80.769	292.5	1.97	3n	1.6	26-Inch	
11765	J 809	18 51.7 +20 41	11806	A 861	18 54.5 -01 03								
79.715	32.1	1.61	2 5	0.0	3	26	80.676	343.9	1.39	1 6	-0.1	3 1.5	26
79.718	33.9	1.53	2 6	0.0	3 0.1	26	80.720	342.8	1.52	1 5	0.0	3 1.3	26
80.651	32.1	1.55	2 7	0.0	3 0.0	26	81.579	341.5	1.47	1 5	-0.1	3 1.2	26
80.028	32.7	1.56	3n	0.0	26-Inch		80.992	342.7	1.46	3n	1.3	26-Inch	
11763	STF 2409	18 51.7 +13 31	11834	STT 525	18 54.9 +33 58								
84.719	22.7	1.00	2 5	-0.1	3 1.1	26	85.589	128.6	1.78	4 6	0.0	3 3.0	26
84.724	21.3	0.95	2 6	-0.2	3 0.6	26	85.644	126.4	1.69	2 7	0.0	3 1.8	26
85.543	18.8	1.00	2 5	-0.2	3 1.0	26	85.658	129.8	1.77	2 6	-0.2	3 4.0	26
84.995	20.9	0.98	3n	0.9	26-Inch		85.630	128.3	1.75	3n	2.9	26-Inch	
11769	HU 199	18 52.1 +11 48		VYS	18 54.9 +10 58								
84.719	348.2	0.74	2 6	0.0	3 0.3	26	84.623	28.5	4.22	2 7	+0.1	3 2.8	26
84.724	347.5	0.86	2 6	0.0	3 0.5	26	84.713	28.7	4.23	2 6	+0.6	3 3.5	26
85.543	346.2	0.73	2 5	-0.2	3 0.4	26	84.716	27.0	4.27	2 6	0.0	3 3.0	26
84.995	347.3	0.78	3n	0.4	26-Inch		86.709	23.8	4.24	1 6	0.0	3 3.0	26
							86.712	30.1	3.96	2 6	0.0	3 3.5	26
							85.494	27.6	4.18	5n	3.2	26-Inch	
Decrease in angle and a large increase in separation since discovery.													
11792	A 1383	18 52.9 +36 14	11842	A 2192	18 55.8 +03 27								
79.715	300.1	1.53	2 5	0.0	3 2.0	26	80.659	98.8	0.25	2 7	+0.3	3 0.2	26
79.718	300.5	1.37	2 7	+0.1	3 1.5	26	80.676	100.6	0.22	2 7	-0.1	3 0.1	26
80.449	300.1	1.46	2 5	0.0	3 1.4	26	80.700	97.2	0.32	2 5	0.0	3 0.3	26
79.961	300.2	1.45	3n	1.6	26-Inch		80.720	96.7	0.26	2 6	0.0	3 0.2	26
							80.689	98.3	0.26	4n	0.2	26-Inch	
Heintz, 1963 (2): +6.6, -0.02. Heintz's other orbit gives worse residuals.													

Probably optical.

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

155

11844	A 2193	18 55.8 +03 23	11897	STF 2438	18 57.4 +58 13
80.659	350.3 0.76	2 7 +0.2 3 0.2 26	81.656	3.4 0.83	2 6 -0.1 4 0.4 26
80.676	350.2 0.68	2 7 -0.1 3 0.1 26	81.697	5.6 0.83	2 5 -0.1 3 0.5 26
80.700	350.4 0.77	1 5 +0.1 3 0.4 26	81.730	5.5 0.98	2 7 -0.2 3 0.6 26
80.720	349.0 0.74	2 6 0.0 3 0.3 26	81.733	3.8 0.83	2 4 -0.4 3 0.4 26
80.689	350.0 0.74	4n 0.2 26-Inch	81.704	4.6 0.87	4n 0.5 26-Inch
11851	BU 972	18 56.1 -00 34	Jastrzebski, 1959: +2.6, -0.02.		
81.637	3.9 1.26	1 5 -0.1 3 1.0 26	11906	HU 332	18 59.0 +22 29
81.697	4.7 1.15	1 5 -0.2 3 0.7 26	81.579	248.6 0.54	2 4 0.0 3 26
81.735	1.5 1.07	1 6 -0.1 4 1.0 26	81.631	258.7 0.40	2 5 0.0 3 0.2 26
81.690	3.4 1.16	3n 0.9 26-Inch	81.637	255.2 0.40	2 5 0.0 3 0.6 26
11871	BU 648	18 57.0 +32 54	81.650	255.2 0.40	2 8 0.0 5 0.5 26
77.535	62.0 1.01	2 6 -0.4 3 2.6 26	84.724	254.6 0.36	2 6 0.0 3 0.3 26
77.574	59.0 0.98	2 7 +0.3 4 2.6 26	85.559	251.4 0.40	2 6 0.0 3 0.3 26
77.593	59.7 0.97	1 4 0.0 3 2.8 26	85.587	259.1 0.46	2 7 0.0 4 0.3 26
77.631	59.7 0.99	2 7 0.0 3 2.5 26	85.644	261.8 0.45	2 6 0.0 3 0.2 26
78.510	56.5 1.05	3 5 0.0 3 2.2 26	81.624	254.4 0.43	4n 0.4 26-Inch
78.512	56.5 0.98	2 6 0.0 3 2.2 26	85.378	256.7 0.42	4n 0.3 26-Inch
78.516	56.6 1.01	2 5 0.0 3 2.2 26	11929	A 1387	18 59.4 +54 50
78.529	54.8 1.08	2 7 +0.2 3 2.6 26	81.653	356.7 0.31	2 7 0.0 3 0.3 26
79.715	47.5 1.08	2 5 0.0 3 2.4 26	81.656	355.3 0.33	2 6 0.0 4 0.0 26
79.718	48.4 1.00	2 7 +0.1 3 2.4 26	81.697	358.3 0.30	2 5 0.0 3 0.0 26
80.449	45.8 1.13	1 5 +0.1 3 2.5 26	81.733	351.5 0.32	2 5 -0.3 3 0.0 26
80.651	43.4 1.15	2 7 0.0 3 2.2 26	81.685	355.4 0.32	4n 0.0 26-Inch
81.631	42.2 1.25	2 6 0.0 3 2.6 26	11919	HU 677	19 00.2 +13 03
81.637	41.7 1.16	2 5 0.0 3 2.5 26	80.654	43.0 1.62	2 6 0.0 3 0.0 26
81.645	41.1 1.19	2 5 0.0 3 2.5 26	80.676	42.4 1.68	2 6 0.0 3 0.4 26
81.650	45.1 1.13	2 8 -0.1 5 2.5 26	80.700	41.7 1.74	2 5 +0.2 3 0.2 26
84.623	36.8 1.25	2 8 +0.1 3 2.5 26	80.677	42.4 1.68	3n 0.2 26-Inch
84.648	35.6 1.09	2 7 0.0 3 2.4 26	11955	HU 1295	19 01.5 +32 53
84.716	36.5 1.19	2 7 +0.1 3 2.5 26	78.680	246.2 0.24	2 7 0.0 3 0.8 26
84.719	36.0 1.18	2 6 0.0 3 2.5 26	78.721	237.8 0.21	2 5 0.0 3 0.5 26
85.559	34.6 1.28	2 6 -0.1 3 2.4 26	78.737	243.6 0.23	2 5 +0.2 3 1.0 26
85.587	35.6 1.15	2 6 -0.1 4 2.5 26	78.713	242.5 0.23	3n 0.8 26-Inch
85.589	33.4 1.16	2 7 0.0 3 2.6 26	11946	ROE 124	19 01.6 +16 31
85.644	34.7 1.12	2 6 0.0 3 2.8 26	86.709	236.2 5.91	2 6 0.0 3 26
86.422	31.4 1.13	2 5 0.0 3 2.2 26	86.712	236.3 5.95	2 6 0.0 3 0.1 26
86.463	30.5 1.19	2 6 0.0 3 2.7 26	86.710	236.2 5.93	2n 0.1 26-Inch
86.660	28.6 1.21	2 5 0.0 3 2.2 26			
86.690	27.9 1.15	2 7 -0.1 3 2.4 26			
87.558	27.6 1.04	2 7 0.0 3 2.0 26			
87.572	26.0 1.14	2 7 0.0 3 2.2 26			
87.635	26.0 1.06	2 6 -0.1 3 2.0 26			
87.667	25.4 1.17	2 6 -0.1 3 2.4 26			
77.583	60.1 0.99	4n 2.6 26-Inch			
78.517	56.1 1.03	4n 2.3 26-Inch			
80.133	46.3 1.09	4n 2.4 26-Inch			
81.641	42.5 1.18	4n 2.5 26-Inch			
84.676	36.2 1.18	4n 2.5 26-Inch			
85.595	34.6 1.18	4n 2.6 26-Inch			
86.559	29.6 1.17	4n 2.4 26-Inch			
87.608	26.2 1.10	4n 2.2 26-Inch			
von Schrutka, 1939: +0.1, +0.06; -0.2, +0.03; -4.4, 0.00; -3.1, +0.05; -0.9, +0.03; -0.6, +0.04; -2.1, +0.05; +2.1, +0.01.					

11956	STF 2437		19 01.9 +19 11	11981	A 360		19 03.5 +07 18
77.631	29.1	0.53	1 6 0.0 3 0.2 26	79.715	286.6	0.69	2 5 0.0 3 26
77.743	28.2	0.57	2 4 -0.3 3 0.2 26	79.718	290.0	0.53	2 7 +0.1 3 0.3 26
77.746	28.2	0.65	2 6 0.0 3 0.2 26	80.651	288.8	0.56	2 7 0.0 3 0.3 26
77.760	26.8	0.58	2 6 +0.1 3 0.2 26				
81.579	24.1	0.60	2 6 0.0 3 0.8 26	80.028	288.5	0.59	3n 0.3 26-Inch
81.637	25.3	0.60	2 5 0.0 3 0.0 26				
81.645	25.2	0.65	2 5 0.0 3 0.2 26				
81.650	25.8	0.63	2 7 0.0 3 0.4 26	11998	A 2992		19 03.8 +26 42
				81.579	268.0	0.27	2 5 0.0 3 26
77.720	28.1	0.58	4n 0.2 26-Inch	81.631	271.6	0.24	2 5 0.0 3 0.0 26
81.628	25.1	0.62	4n 0.3 26-Inch	81.637	261.3	0.29	2 5 +0.1 3 26
				81.645	268.5	0.29	2 5 0.0 3 0.1 26
11953	A 41		19 02.2 -06 42	85.587	270.5	0.18	2 7 0.0 4 26
76.703	183.6	0.44	1 5 +0.1 3 0.1 26	85.589	270.5	0.23	2 7 0.0 3 26
76.728	180.7	0.47	1 5 0.0 3 0.3 26	85.644	274.9	0.31	2 6 0.0 3 0.0 26
77.746	177.0	0.40	1 5 0.0 3 0.1 26	85.658	280.6	0.34	2 5 -0.2 3 26
77.760	178.3	0.40	1 6 +0.2 3 0.2 26				
				81.623	267.4	0.27	4n 0.0 26-Inch
77.234	179.9	0.43	4n 0.2 26-Inch	85.620	274.1	0.26	4n 0.0 26-Inch
				Dommanget, 1979: +7.9, +0.01; +19.3, 0.00. Quadrant in doubt. The orbit fails.			
				12016	DA 9		19 04.3 +43 53
11963	A 42		19 02.6 -06 20	87.558	172.9	2.05	2 7 0.0 3 3.5 26
80.654	60.4	0.87	2 6 0.0 3 0.1 26	87.572	174.8	2.11	2 7 0.0 3 3.0 26
80.676	63.0	0.93	2 6 0.0 3 0.3 26	87.635	176.7	1.93	2 5 0.0 3 2.6 26
80.700	62.1	0.99	2 5 +0.1 3 0.3 26	87.667	174.6	1.98	2 5 -0.1 3 3.0 26
				87.608	174.8	2.02	4n 3.0 26-Inch
80.677	61.8	0.93	3n 0.2 26-Inch				
				12035	A 1389		19 05.0 +55 53
11974	A 2195		19 02.9 +01 47	78.512	49.1	0.20	2 6 0.0 3 0.0 26
80.676	38.4	1.97	1 6 0.0 3 4.0 26	78.551	58.9	0.19	2 8 -0.2 3 0.2 26
80.720	32.7	1.82	1 5 0.0 3 3.5 26	78.642	63.5	0.21	2 6 0.0 3 0.0 26
80.766	39.1	1.99	2 5 +0.2 3 3.8 26	78.644	62.0	0.23	2 4 0.0 3 0.0 26
				78.587	58.4	0.21	4n 0.0 26-Inch
80.721	36.7	1.93	3n 3.8 26-Inch				
				12021	BU 466		19 05.2 +10 50
11997	STF 2451		19 03.0 +51 35	81.697	164.9	1.92	2 5 0.0 3 0.4 26
87.558	77.9	1.96	2 7 0.0 3 0.2 26	81.730	163.8	2.01	2 4 -0.2 3 0.7 26
87.572	79.3	1.91	2 7 0.0 3 0.1 26	81.733	164.3	1.94	2 3 0.0 3 0.8 26
87.635	81.5	1.95	2 5 0.0 3 0.2 26				
87.667	81.8	2.01	2 5 -0.1 3 0.0 26	81.720	164.3	1.96	3n 0.6 26-Inch
87.608	80.1	1.96	4n 0.1 26-Inch	12033	HU 940		19 05.5 +33 52
				80.654	205.8	0.46	2 7 +0.1 3 0.3 26
11990	A 589		19 03.1 +42 33	80.657	203.8	0.46	2 7 +0.3 3 0.3 26
81.653	5.6	0.79	2 7 0.0 3 1.0 26	80.659	209.3	0.61	2 7 +0.1 3 0.3 26
81.656	6.5	0.70	2 6 0.0 4 1.0 26	80.676	205.5	0.49	2 6 +0.1 3 0.3 26
81.697	9.3	0.78	2 5 0.0 3 1.2 26	86.422	199.9	0.56	2 5 0.0 3 0.2 26
81.735	10.3	0.73	2 6 -0.1 4 0.8 26	86.463	202.3	0.67	2 5 -0.1 3 0.2 26
				86.660	202.6	0.55	2 6 0.0 3 0.0 26
81.685	7.9	0.75	4n 1.0 26-Inch	86.690	205.0	0.59	2 7 -0.1 3 0.3 26
				80.662	206.1	0.50	4n 0.3 26-Inch
				86.559	202.4	0.59	4n 0.2 26-Inch
				Baize, 1980: +3.3, +0.05; +3.7, +0.14.			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

157

12032	HO 95	19 05.6 +27 17	12102	HO 444	19 09.2 +26 56
80.772	185.1	0.22 2 5 0.0 3 0.0 26	79.693	68.6	1.22 2 5 0.0 3 1.2 26
81.631	190.3	0.19 2 5 +0.2 3 26	79.715	68.4	1.47 2 5 0.0 3 1.8 26
81.645	179.6	0.15 2 5 +0.1 3 0.0 26	79.718	70.2	1.33 2 7 +0.1 3 2.0 26
81.650	185.8	0.16 2 7 0.0 5 0.2 26	79.709	69.1	1.34 3n 1.7 26-Inch
84.648	185.9	0.17 2 7 +0.1 3 26	12108	A 863	19 09.8 -00 17
84.716	185.8	0.18 2 7 +0.2 3 0.0 26	77.746	139.7	0.34 3 6 0.0 3 1.4 26
84.719	183.0	0.21 2 5 0.0 3 0.2 26	77.760	140.5	0.38 3 6 +0.1 3 0.6 26
81.424	185.2	0.18 4n 0.1 26-Inch	78.512	134.1	0.40 2 6 +0.2 3 1.2 26
84.694	184.9	0.19 3n 0.1 26-Inch	78.006	138.1	0.37 3n 1.1 26-Inch
12040	STF 2454	19 06.2 +30 26	12144	A 1391	19 10.6 +54 29
85.658	286.7	1.14 2 5 -0.1 3 1.0 26	81.735	262.6	0.19 2 5 0.0 4 26
86.422	283.8	1.21 2 6 -0.1 3 0.7 26	81.735	262.6	0.19 1n 26-Inch
86.463	285.6	1.21 2 5 0.0 3 1.2 26	Baize, 1987: +14.8, +0.04.		
86.660	285.3	1.40 2 6 0.0 3 1.0 26	12137	A 590	19 10.6 +41 38
86.301	285.4	1.24 4n 1.0 26-Inch	81.735	331.9	0.51 2 5 -0.1 4 0.4 26
Baize, 1976: +3.9, 0.00.			84.719	337.1	0.49 2 5 -0.1 3 0.4 26
12113	STT 369	19 07.1 +72 05	84.724	335.0	0.43 2 6 0.0 3 0.2 26
87.667	14.5	0.68 1 5 -0.1 3 0.3 26	83.726	334.7	0.48 3n 0.3 26-Inch
87.670	15.4	0.63 1 7 -0.1 3 0.3 26	12145	SE 2 BC	19 11.1 +38 47
87.760	14.9	0.78 1 5 -0.1 3 0.3 26	77.631	100.0	0.49 2 6 0.0 3 0.2 26
87.699	14.9	0.70 3n 0.3 26-Inch	77.746	99.1	0.51 3 6 0.0 3 0.4 26
12071	STF 2466	19 07.9 +29 48	77.760	102.1	0.55 2 6 +0.2 3 0.4 26
86.709	104.4	2.44 2 7 0.0 3 0.1 26	81.637	94.8	0.49 2 5 0.0 3 0.3 26
86.747	103.5	2.36 2 6 0.0 3 0.4 26	81.645	95.2	0.54 2 5 +0.2 3 0.2 26
86.767	102.9	2.36 2 6 0.0 3 0.3 26	81.650	96.0	0.55 2 7 0.0 5 0.3 26
86.741	103.6	2.39 3n 0.3 26-Inch	81.653	94.4	0.55 2 7 -0.1 3 0.3 26
12063	J 812	19 07.9 +09 27	84.721	93.6	0.49 2 4 0.0 3 0.3 26
79.693	121.5	2.35 2 5 0.0 3 0.7 26	84.724	94.7	0.49 2 5 +0.1 3 0.2 26
80.449	120.5	2.43 2 5 0.0 3 0.4 26	85.587	94.1	0.61 2 6 0.0 3 0.2 26
80.651	120.0	2.57 2 7 0.0 3 0.5 26	85.589	92.9	0.61 2 6 0.0 3 0.2 26
80.264	120.7	2.45 3n 0.5 26-Inch	85.644	94.4	0.67 2 6 0.0 3 0.2 26
12067	J 813	19 08.1 +09 32	77.712	100.4	0.52 3n 0.3 26-Inch
79.715	9.3	1.57 2 5 0.0 3 26	81.646	95.1	0.53 4n 0.3 26-Inch
79.718	7.0	1.35 2 7 +0.1 3 0.3 26	85.253	93.9	0.57 5n 0.2 26-Inch
80.654	7.1	1.20 1 7 +0.2 3 0.4 26	Baize, 1969: +1.4, +0.06; 0.0, +0.02; +1.9, +0.03.		
80.029	7.8	1.37 3n 0.4 26-Inch	12079	HO 98	19 08.2 +27 06
12079	HO 98	19 08.2 +27 06	86.712	89.4	0.23 2 7 0.0 3 0.0 26
86.712	89.4	0.23 2 7 0.0 3 0.0 26	86.767	84.8	0.25 2 8 -0.1 3 0.0 26
86.767	84.8	0.25 2 8 -0.1 3 0.0 26	86.788	86.8	0.27 2 7 +0.1 3 0.0 26
86.788	86.8	0.27 2 7 +0.1 3 0.0 26	86.802	88.5	0.26 2 7 +0.4 3 0.0 26
86.802	88.5	0.26 2 7 +0.4 3 0.0 26	86.767	87.4	0.25 4n 0.0 26-Inch
86.767	87.4	0.25 4n 0.0 26-Inch	12147	BU 1204	19 12.0 +02 37
86.712	89.4	0.23 1 5 0.0 3 0.7 26	80.772	189.5	0.25 1 5 0.0 3 0.7 26
81.650	183.0	0.22 1 6 +0.1 5 0.5 26	81.653	182.8	0.28 1 7 0.0 3 0.5 26
81.653	182.8	0.28 1 7 0.0 3 0.5 26	81.656	187.7	0.20 1 6 0.0 4 0.8 26
81.656	187.7	0.20 1 6 0.0 4 0.8 26	81.433	185.8	0.24 4n 0.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

12174	ES 1162	19 12.3 +47 12	12201	STF 2484	19 14.3 +19 04
84.719	85.7 2.14	2 5 0.0 3 0.6 26	81.697	238.3 2.32	2 5 0.0 3 1.5 26
84.722	87.8 2.00	2 6 -0.1 3 0.8 26	81.730	240.1 2.28	2 4 -0.2 3 1.8 26
			81.733	240.5 2.42	2 3 +0.1 3 1.5 26
84.720	86.8 2.07	2n 0.7 26-Inch	81.720	239.6 2.34	3n 1.6 26-Inch
			Hopmann, 1973: +3.8, +0.16. The "orbit" rests on an arc length of some 20 degrees.		
12161	HU 941	19 12.3 +32 15	12215	BU 975 BC	19 14.5 +34 33
76.728	146.9 1.00	1 6 0.0 3 3.5 26	85.589	259.5 1.40	2 6 0.0 3 0.3 26
77.574	147.0 1.05	1 6 +0.2 4 4.5 26	85.644	260.2 1.26	2 6 +0.2 3 0.5 26
77.631	148.8 1.17	1 6 +0.1 3 3.5 26	85.658	261.5 1.26	2 5 -0.3 3 0.2 26
77.311	47.3 1.07	3n 3.8 26-Inch	85.630	260.4 1.31	3n 0.3 26-Inch
	COU 320	19 12.3 +21 13	There has been a considerable increase in angle and separation.		
86.709	111.5 0.18	2 6 0.0 3 26	12228	STF 2488	19 15.5 +20 02
86.712	113.7 0.20	2 6 0.0 3 26	81.656	347.3 1.74	2 6 0.0 4 0.8 26
86.767	107.6 0.17	2 7 0.0 3 26	81.697	347.0 1.69	2 5 0.0 3 1.2 26
86.729	110.9 0.18	3n 26-Inch	81.730	348.0 1.59	2 4 -0.1 3 1.2 26
	OL 22	19 12.4 -33 04	81.694	347.4 1.67	3n 1.1 26-Inch
78.784	328.7 0.16	2 8 +1.2 1 0.2 36	12257	A 156	19 16.7 +24 17
78.789	331.0 0.14	2 7 +1.5 1 0.2 36	80.700	61.1 0.30	2 5 +0.1 3 0.5 26
84.773	4.5 0.31	2 6 +0.5 3 0.0 60	80.720	58.4 0.25	2 5 0.0 3 0.2 26
84.776	5.3 0.35	2 4 +0.8 3 60	80.766	60.3 0.31	2 5 +0.2 3 0.3 26
84.784	5.6 0.29	2 6 +0.9 3 0.2 60	80.769	57.2 0.29	2 7 +0.1 3 0.4 26
78.786	329.8 0.18	2n 0.2 36-Inch	84.623	62.9 0.28	2 7 +0.1 3 0.3 26
84.778	5.1 0.32	3n 0.1 60-Inch	84.648	60.6 0.30	2 6 +0.1 3 0.2 26
Worley, 1981: -0.4, -0.03; +3.0, 0.00.			84.713	59.7 0.23	2 7 +0.1 3 0.3 26
	J 2168	19 12.5 +03 06	80.739	59.2 0.29	4n 0.4 26-Inch
86.463	337.6 3.20	2 5 0.0 3 0.2 26	84.661	61.1 0.27	3n 0.3 26-Inch
86.660	337.7 2.95	2 5 0.0 3 0.0 26		RST 4036	19 16.7 -45 53
86.690	335.6 3.13	2 7 0.0 3 0.2 26	78.803	200.8 0.17	2 5 +1.7 1 60
86.604	337.0 3.09	3n 0.1 26-Inch	78.806	202.0 0.17	2 6 +2.0 1 0.2 60
			78.808	203.0 0.18	3 7 +2.0 1 0.2 60
12172	STF 2482	19 13.0 +19 08	84.787	275.7 0.14	2 7 +1.1 3 0.0 60
81.656	344.4 1.78	2 6 0.0 4 1.2 26	84.790	272.4 0.15	2 7 +1.2 3 0.0 60
81.730	345.4 1.73	2 4 -0.1 3 1.2 26	84.793	281.7 0.15	2 7 +1.2 3 0.1 60
81.733	344.9 1.89	2 3 0.0 3 1.2 26	78.806	201.9 0.17	3n 0.2 60-Inch
81.706	344.9 1.80	3n 1.2 26-Inch	84.790	276.6 0.15	3n 0.0 60-Inch
			Heintz, 1979: -1.0, -0.02; +8.4, -0.04. 1984: -1.6, -0.03; +4.9, -0.02.		
12176	A 153	19 13.2 +21 54	12296	STF 2509	19 16.9 +63 13
80.700	279.5 0.87	2 5 0.0 3 2.2 26	87.558	328.4 1.85	2 7 0.0 3 0.3 26
80.720	278.1 0.83	2 6 0.0 3 2.4 26	87.572	329.2 1.72	2 6 0.0 3 26
80.766	281.5 0.76	2 5 +0.1 3 2.2 26	87.635	329.1 1.71	2 5 -0.1 3 0.3 26
			87.667	328.6 1.59	4 5 0.0 3 0.8 26
80.729	279.7 0.82	3n 2.3 26-Inch	87.608	328.8 1.72	4n 0.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

159

12294	ES 1845	19 16.9 +62 00		12315	A 1393	19 18.6 +53 58	
87.558	154.6	5.51	2 7 +0.1 3 3.5 26	78.644	251.8	0.78	2 5 -0.1 3 1.2 26
87.635	152.2	5.59	2 5 0.0 3 3.5 26	78.680	251.8	0.71	2 7 -0.1 3 1.3 26
87.667	153.6	5.75	2 5 0.0 3 4.0 26	78.721	251.3	0.71	2 5 -0.1 3 1.0 26
87.620	153.5	5.62	3n 3.8 26-Inch	78.682	251.6	0.73	3n 1.2 26-Inch
12269	HU 336	19 17.2 +18 53			I 253	19 19.0 -33 16	
80.651	194.9	1.46	2 6 0.0 3 0.3 26	78.784	140.9	0.57	2 8 +1.2 1 0.2 26
80.654	194.2	1.32	1 7 0.0 3 0.3 26	78.789	142.1	0.53	2 7 +1.4 2 0.2 26
80.657	193.6	1.51	2 6 +0.4 3 0.2 26	78.786	141.5	0.55	2n 0.2 36-Inch
80.654	194.2	1.43	3n 0.3 26-Inch				
	GLE 3	19 17.3 -66 40			VBS	19 19.2 +28 44	
78.784	301.6	0.38	2 8 +0.9 1 0.4 36	76.728	93.6	2.25	2 7 0.0 3 0.3 26
78.789	300.7	0.42	2 6 +1.4 1 0.5 36	78.529	93.4	1.90	2 6 0.0 3 0.3 26
84.787	307.6	0.47	2 7 +1.0 3 0.5 60	78.721	96.4	2.05	2 5 -0.1 3 0.1 26
84.790	310.2	0.41	2 7 +1.1 3 0.5 60	86.709	100.1	2.25	2 6 0.0 3 0.5 26
84.793	309.8	0.45	2 7 +1.1 3 0.4 60	86.712	96.9	2.15	2 6 0.0 3 26
78.786	301.2	0.40	2n 0.4 36-Inch	77.993	94.5	2.07	3n 0.2 26-Inch
84.790	309.2	0.44	3n 0.4 60-Inch	86.710	98.5	2.20	2n 0.5 26-Inch
Heintz, 1973: -4.0, -0.09; -5.6, -0.08.				I cannot find the neighboring DOO pair, and strongly suspect it is identical with this one.			
12286	A 267	19 17.5 +26 38		12306	J 485	19 19.3 +05 35	
80.769	181.2	0.39	2 6 +0.1 3 0.5 26	81.653	70.2	2.30	2 7 0.0 3 0.8 26
80.772	186.6	0.54	2 6 +0.1 3 0.3 26	81.735	72.3	2.26	2 5 0.0 4 0.7 26
81.631	178.4	0.42	2 6 0.0 3 0.7 26	81.694	71.2	2.28	2n 0.8 26-Inch
81.650	175.6	0.31	2 6 +0.2 5 0.4 26				
81.206	180.4	0.42	4n 0.5 26-Inch				
12287	BU 248	19 17.7 +23 02					
79.715	121.8	1.81	2 5 0.0 3 3.0 26				
79.718	125.1	1.63	2 7 0.0 3 3.0 26				
80.449	125.8	1.64	2 5 0.0 3 2.0 26				
79.960	124.2	1.69	3n 2.7 26-Inch				
12275	A 2268	19 17.8 +03 18		12329	HWE 47	19 20.6 +02 56	
80.772	213.0	0.62	1 4 0.0 3 0.8 26	78.642	311.7	0.38	2 7 -0.1 3 0.2 26
81.650	216.6	0.56	2 6 0.0 5 0.6 26	78.644	311.9	0.35	2 5 0.0 3 0.3 26
81.653	211.6	0.60	2 7 0.0 3 0.7 26	78.680	313.5	0.45	2 6 0.0 3 0.1 26
81.656	212.7	0.61	2 6 0.0 4 0.7 26	84.719	308.8	0.45	2 5 -0.1 3 0.2 26
81.433	213.5	0.60	4n 0.7 26-Inch	84.724	307.4	0.42	2 5 0.0 3 0.3 26
				85.559	308.8	0.47	2 7 +0.2 3 0.3 26
				78.655	312.4	0.39	3n 0.2 26-Inch
				85.000	308.3	0.45	3n 0.3 26-Inch
	HE1 175	19 18.5 +16 25		12340	HU 338	19 21.2 +17 51	
86.463	165.4	1.72	1 5 0.0 3 1.6 26	78.529	130.8	0.20	2 6 0.0 3 0.0 26
86.660	165.5	1.77	1 6 0.0 3 1.5 26	78.642	135.1	0.23	2 7 0.0 3 0.0 26
86.690	164.6	1.71	2 6 -0.1 3 1.2 26	78.680	138.3	0.21	2 6 +0.2 3 0.0 26
86.604	165.2	1.73	3n 1.4 26-Inch	78.617	134.7	0.21	3n 0.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

12366	BU 1129	19 21.6 +52 22	12524	STF 2550	19 27.0 +73 21
73.732	Not seen	7 +0.1 4 26	77.631	72.7 1.86	2 7 0.0 3 0.0 26
			77.746	72.1 1.86	2 7 0.0 3 0.0 26
			77.760	71.1 1.76	2 6 0.0 3 0.0 26
	Computed separation from Baize's orbit (1984) is 0.03" at this epoch.		77.712	72.0 1.83	3n 0.0 26-Inch
	MLR 220	19 24.7 +59 24		RST 1035	19 27.5 -54 58
87.635	339.3 0.62	2 5 0.0 3 26	84.773	283.3 0.54	2 7 +0.5 3 0.3 60
87.667	342.8 0.66	2 5 0.0 3 26	84.776	282.0 0.41	2 7 +0.4 3 0.0 60
87.670	341.5 0.71	2 7 -0.1 3 0.2 26	84.782	281.2 0.35	2 6 0.0 3 0.2 60
87.657	341.2 0.66	3n 0.2 26-Inch	84.777	282.2 0.43	3n 0.2 60-Inch
12410	J 1304	19 24.8 +11 37		COU 514	19 27.6 +20 09
79.715	59.9 2.29	2 5 -0.1 3 0.6 26	86.767	90.5 0.43	2 7 -0.2 3 0.7 26
79.718	60.2 2.16	2 7 0.0 3 1.0 26	87.558	94.1 0.57	2 6 0.0 3 0.4 26
80.449	60.1 2.16	2 5 -0.1 3 1.0 26	87.635	97.9 0.40	2 5 0.0 3 0.3 26
79.961	60.1 2.20	3n 0.9 26-Inch	87.670	86.9 0.43	2 7 0.0 3 0.6 26
12414	STF 2513	19 25.2 +02 27	87.408	92.4 0.46	4n 0.5 26-Inch
84.719	326.0 2.02	2 5 +0.2 3 0.8 26	12465	A 1182	19 27.6 +09 10
84.724	325.9 1.94	2 6 0.0 3 0.7 26	80.651	294.5 0.61	2 6 0.0 2 0.7 26
85.587	326.9 2.05	2 6 -0.1 4 0.7 26	80.654	294.1 0.66	2 8 0.0 3 0.6 26
85.010	326.3 2.00	3n 0.7 26-Inch	80.676	295.6 0.67	2 6 -0.2 3 1.4 26
12439	A 709	19 25.4 +46 31	80.660	294.7 0.65	3n 0.9 26-Inch
78.721	66.8 0.56	2 4 0.0 3 0.5 26	12469	SCJ 22	19 28.2 -12 09
78.737	64.1 0.47	2 5 0.0 3 0.5 26	78.551	108.3 0.38	2 7 -0.2 3 0.2 26
79.693	61.2 0.52	2 4 0.0 3 0.3 26	78.642	110.3 0.40	2 6 0.0 3 0.2 26
79.050	64.0 0.52	3n 0.4 26-Inch	78.644	109.9 0.36	2 5 +0.1 3 0.2 26
12422	A 365	19 25.6 +07 58	78.680	110.8 0.41	2 6 +0.2 3 0.2 26
77.574	152.6 1.15	1 6 0.0 4 4.0 26	81.631	132.7 0.38	2 5 -0.1 3 26
77.746	153.8 1.36	1 6 0.0 3 2.8 26	81.645	129.6 0.43	2 5 +0.1 3 26
77.760	157.1 1.47	1 5 0.0 3 3.5 26	81.650	128.4 0.38	2 5 +0.1 5 0.3 26
77.693	154.5 1.33	3n 3.4 26-Inch	81.653	130.4 0.40	2 6 -0.1 3 0.3 26
12447	STF 2525	19 26.6 +27 19	85.559	173.6 0.41	1 6 +0.1 3 0.2 26
81.637	293.3 1.87	2 5 -0.1 3 0.2 26	85.587	173.9 0.40	1 5 0.0 4 0.4 26
81.645	293.5 1.83	2 5 0.0 3 0.2 26	85.589	173.6 0.36	1 5 0.0 3 0.6 26
81.656	292.7 1.82	2 7 0.0 4 0.3 26	85.644	172.8 0.35	1 5 0.0 3 26
81.730	293.0 1.82	2 4 -0.2 3 0.3 26	86.660	182.8 0.50	4 5 0.0 3 26
81.667	293.1 1.84	4n 0.2 26-Inch	86.690	182.8 0.55	1 6 -0.1 3 26
Heintz, 1984: +0.5, +0.01.			86.709	181.8 0.38	1 5 0.0 3 26
	POP 33	19 26.8 +34 57	86.712	183.4 0.41	1 5 -0.1 3 0.5 26
84.623	234.6 0.85	2 7 0.0 3 0.3 26	87.558	190.3 0.46	1 7 0.0 3 0.3 26
84.648	232.0 0.85	2 6 +0.2 3 0.2 26	87.670	196.4 0.51	1 7 0.0 3 0.5 26
84.713	234.0 0.88	2 6 +0.2 3 0.2 26	87.760	192.4 0.47	2 5 -0.1 3 0.4 26
84.661	233.5 0.86	3n 0.2 26-Inch	78.629	109.8 0.39	4n 0.2 26-Inch
			81.645	130.3 0.40	4n 0.3 26-Inch
			85.595	173.5 0.38	4n 0.3 26-Inch
			86.693	182.7 0.46	4n 0.5 26-Inch
			87.663	193.0 0.48	3n 0.4 26-Inch
			Heintz, 1985: +1.7, -0.08; -2.4, -0.04; +4.9, -0.05; +4.3, +0.02; +6.2, +0.03.		
			Earlier Heintz(1975) and Baize(1984) or- bits predicted T too late, and e too small. This orbit is better, but will need revision in the same sense. A later orbit by Baize gives worse residuals.		

161

12501	A 160		19 28.8 +23 04	12535	BU 143		19 29.9 +49 31
80.700	67.6	0.30	2 5 -0.1 3 0.1 26	77.763	193.6	2.12	2 5 0.0 3 1.0 26
80.720	71.3	0.31	2 6 -0.1 3 0.2 26	78.721	192.8	2.13	2 5 +0.1 3 1.0 26
80.766	70.4	0.33	2 6 0.0 3 0.3 26	78.737	192.1	2.14	2 5 0.0 3 1.4 26
80.729	69.8	0.31	3n 0.2 26-Inch	78.407	192.8	2.13	3n 1.1 26-Inch
12502	A 1651		19 29.0 +15 14	12519	A 2274		19 30.1 +02 19
81.631	258.9	0.35	2 5 +0.1 3 1.2 26	79.715	257.8	3.46	2 5 0.0 3 2.8 26
81.650	270.7	0.28	2 5 +0.1 3 1.0 26	79.718	256.5	3.18	2 6 0.0 3 2.8 26
81.653	256.6	0.25	2 7 +0.1 3 1.3 26	80.449	255.5	3.28	2 5 -0.1 3 2.5 26
81.656	263.6	0.27	2 6 0.0 4 1.0 26	79.961	256.6	3.31	3n 2.7 26-Inch
81.648	262.4	0.29	4n 1.1 26-Inch	12532	A 269		19 30.6 +27 15
12503	KUI 91		19 29.4 -07 03	84.716	203.1	0.73	2 6 0.0 3 0.6 26
80.654	229.3	1.54	1 8 +0.1 3 4.5 26	84.724	204.2	0.59	1 6 0.0 3 0.6 26
80.676	234.9	1.56	1 6 -0.1 3 4.5 26	85.559	201.7	0.61	2 6 +0.2 3 0.4 26
80.720	232.5	1.78	3 5 0.0 3 4.2 26	85.000	203.0	0.64	3n 0.5 26-Inch
80.683	232.2	1.63	3n 4.4 26-Inch	12540	MCA 55 AP		19 30.7 +27 58
12508	A 2197		19 29.5 +03 05	79.715	183.5	0.41	1 5 +0.5 3 1.4 26
81.653	247.1	2.79	2 7 0.0 3 4.0 26	79.718	192.8	0.39	4 5 +0.1 3 1.8 26
85.589	246.3	2.69	2 6 0.0 3 4.5 26	79.797	185.6	0.43	3 8 -0.5 3 1.4 26
85.644	249.0	2.66	2 6 0.0 3 3.5 26	79.800	186.2	0.36	3 6 -0.8 3 1.5 26
84.295	247.5	2.71	3n 4.0 26-Inch	79.808	185.5	0.43	2 6 -0.7 3 1.6 26
12515	A 1653		19 29.6 +12 24	79.827	187.2	0.51	1 4 +0.1 3 1.5 26
80.769	196.2	0.22	2 7 0.0 3 1.0 26	79.830	186.9	0.41	1 5 +0.1 3 1.6 26
81.650	192.9	0.20	3 5 +0.2 5 1.0 26	81.804	173.3	0.46	3 5 -0.2 3 2.0 26
81.653	191.4	0.26	2 7 +0.1 3 1.2 26	81.807	178.3	0.41	3 6 0.0 3 1.8 26
81.656	194.7	0.24	2 6 +0.1 4 1.2 26	81.826	175.4	0.43	3 6 +0.2 3 1.8 26
81.432	193.8	0.23	4n 1.1 26-Inch	81.842	175.8	0.50	2 6 +0.3 3 1.8 26
Heintz, 1963: +3.1, 0.00.				79.785	186.8	0.42	7n 1.5 26-Inch
				81.820	175.7	0.45	4n 1.9 26-Inch
				Beta Cygni, first resolved by speckle. Retrograde orbital motion.			
12505	HU 75		19 29.6 -12 39	12577	HU 951		19 30.8 +63 37
80.651	286.0	0.44	2 5 0.0 3 0.5 26	76.613	105.2	0.18	2 6 0.0 4 0.0 26
80.654	286.2	0.44	2 7 0.0 3 0.4 26	77.746	124.0	0.16	3 5 +0.1 3 0.0 26
80.657	287.4	0.47	2 5 +0.4 3 0.6 26	77.760	112.0	0.21	2 6 +0.1 3 0.0 26
80.659	285.0	0.47	2 7 0.0 3 0.5 26	77.763	112.7	0.16	2 5 0.0 3 0.0 26
86.660	291.9	0.47	2 5 0.0 3 26	77.470	113.5	0.18	4n 0.0 26-Inch
86.690	291.5	0.54	2 5 -0.1 3 0.4 26	Costa, Docobo, 1983: -9.7, +0.06. Baize, 1984: -8.3, +0.01.			
86.709	295.3	0.38	2 5 +0.1 3 0.4 26	This is the first positive measure since 1962; not used in either computation. Two recent measures by Heintz give large re- siduals from both predictions, and a mea- sure by Muller is completely anomalous.			
86.712	296.9	0.44	2 5 0.0 3 0.3 26				
80.655	286.2	0.46	4n 0.5 26-Inch				
86.693	293.9	0.46	4n 0.4 26-Inch				
Baize, 1987: +4.5, -0.10; +2.7, -0.05.							

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

12563	STT 374	19 31.1 +50 12		12605	HU 949	19 33.5 +33 06	
87.667	290.9	19.50	2 5 0.0 3 3.0 26	80.772	92.6	0.55	2 5 0.0 3 0.6 26
87.760	292.8	19.81	2 5 -0.2 3 4.0 26	81.656	96.0	0.60	2 5 +0.2 4 0.8 26
87.788	291.1	19.51	2 5 0.0 3 4.0 26	81.735	91.9	0.56	2 5 0.0 4 0.3 26
				81.785	89.1	0.59	2 5 -0.1 3 0.4 26
87.738	291.6	19.61	3n 3.7 26-Inch	81.487	92.4	0.58	4n 0.5 26-Inch
12586	BU 655	19 31.2 +63 19		12629	A 715	19 33.6 +60 02	
77.631	330.6	2.04	1 7 0.0 3 4.5 26	77.574	350.8	0.54	1 6 0.0 4 1.0 26
80.720	330.2	2.07	2 6 0.0 3 4.0 26	77.631	348.9	0.50	1 6 +0.1 3 0.5 26
80.766	332.3	2.14	4 4 0.0 3 4.5 26	77.746	353.0	0.57	1 5 +0.1 3 0.7 26
79.706	331.0	2.08	3n 4.3 26-Inch	77.650	350.9	0.54	3n 0.7 26-Inch
12546	A 161	19 31.2 +22 01		12623	STT 375	19 34.7 +18 08	
78.551	120.6	0.17	2 7 0.0 3 26	80.772	175.3	0.67	4 5 0.0 3 0.6 26
78.642	122.5	0.18	2 6 0.0 3 26	80.810	182.8	0.57	1 6 +0.2 3 0.8 26
78.680	125.4	0.18	2 6 +0.2 3 26	80.832	181.7	0.65	1 3 +0.6 3 0.8 26
78.624	122.8	0.18	3n 26-Inch	81.631	180.0	0.66	2 4 +0.1 3 1.0 26
12538	D 20	19 31.2 -02 07		85.587	179.1	0.66	1 5 0.0 4 0.8 26
79.715	67.3	1.29	2 4 0.0 3 2.4 26	85.589	178.2	0.60	1 6 0.0 3 0.7 26
79.718	69.2	1.18	2 6 0.0 3 1.8 26	85.644	178.1	0.68	1 7 0.0 3 1.0 26
80.449	60.2	1.29	2 5 0.0 3 2.0 26	85.658	180.9	0.50	1 5 -0.4 3 1.0 26
80.651	63.6	1.40	2 6 0.0 3 2.6 26	81.011	180.0	0.64	4n 0.8 26-Inch
80.133	65.1	1.29	4n 2.2 26-Inch	85.620	179.1	0.61	4n 0.9 26-Inch
The primary is the eclipsing system V822 Aql.				12633	A 368	19 35.0 +29 47	
12596	HU 949	19 33.2 +32 54		77.763	155.7	0.41	1 6 0.0 3 0.3 26
80.772	161.9	0.33	2 5 0.0 3 0.8 26	78.512	158.5	0.41	2 6 0.0 3 0.2 26
81.631	155.8	0.29	2 5 0.0 3 0.8 26	78.529	156.9	0.47	2 6 0.0 3 0.3 26
81.645	155.1	0.29	2 4 +0.1 3 26	78.268	157.0	0.43	3n 0.3 26-Inch
81.653	159.1	0.27	2 6 +0.1 3 0.8 26	12631	A 162	19 35.0 +23 28	
81.425	158.0	0.30	4n 0.8 26-Inch	84.623	263.6	0.19	2 8 0.0 3 0.0 26
12600	HO 108	19 33.3 +33 29		84.713	253.9	0.21	2 6 +0.1 3 26
81.653	27.7	0.26	2 7 +0.2 3 0.0 26	84.716	258.5	0.24	2 6 +0.1 3 26
81.656	32.7	0.23	2 5 +0.1 4 0.2 26	87.558	259.1	0.26	2 6 0.0 3 26
81.735	33.3	0.22	2 5 -0.1 4 0.0 26	87.635	263.8	0.25	2 5 0.0 3 0.0 26
81.785	24.0	0.26	2 5 -0.1 3 0.2 26	87.670	257.4	0.27	2 7 0.0 3 26
81.707	29.4	0.24	4n 0.1 26-Inch	87.760	256.0	0.29	2 6 -0.1 3 0.0 26
12626	STF 2553	19 33.4 +62 03		84.684	258.6	0.21	3n 0.0 26-Inch
81.637	123.4	1.12	2 5 0.0 3 0.7 26	87.656	259.6	0.27	4n 0.0 26-Inch
81.735	121.1	0.99	2 5 0.0 4 0.6 26	Erceg, 1975: -6.2, -0.04; -8.3, +0.01.			
81.785	122.5	0.99	2 5 -0.3 3 0.8 26	Zulevic, 1975: -10.9, 0.00; -14.5, +0.06.			
81.787	123.7	1.07	2 7 -0.2 3 0.7 26	The orbits fail.			
81.736	122.7	1.04	4n 0.7 26-Inch		VYS	19 35.2 +08 25	
				86.463	9.5	5.69	1 5 +0.1 3 1.0 26
				86.660	8.8	5.58	1 6 0.0 3 2.5 26
				86.690	7.6	5.33	1 6 -0.1 3 2.4 26
				86.604	8.6	5.53	3n 2.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

163

12634	BU 53	19 35.5 +11 26		OL 23	19 37.7 -34 44
86.788	249.5	1.68	2 6 -0.1 3 0.6 26	84.776	323.1 0.58 2 5 +0.7 3 0.1 60
86.802	249.5	1.75	2 6 0.0 3 0.7 26	84.782	321.6 0.69 2 6 +0.9 3 0.2 60
86.805	249.6	1.71	4 5 +0.2 3 0.7 26	84.787	319.5 0.58 2 7 +1.0 3 0.2 60
86.798	249.5	1.71	3n 0.7 26-Inch	84.782	321.4 0.62 3n 0.2 60-Inch
	B 443	19 36.0 -36 08		12704	A 164 19 37.9 +22 48
84.773	196.6	0.32	2 6 +0.5 3 0.1 60	81.787	229.1 0.25 2 7 0.0 3 1.2 26
84.776	193.4	0.30	3 4 +0.5 3 60	81.790	231.9 0.27 2 5 0.0 4 1.4 26
84.787	191.2	0.22	2 7 +0.9 3 0.3 60	81.807	239.2 0.30 2 6 +0.2 4 1.2 26
84.779	193.7	0.28	3n 0.1 60-Inch	81.795	233.4 0.27 3n 1.3 26-Inch
	I 651	19 36.0 -36 49		12701	J 801 19 37.9 +09 17
84.776	143.6	0.80	2 5 +0.6 3 0.5 60	81.785	79.2 1.61 2 5 0.0 3 0.0 26
84.782	142.4	0.83	2 7 +0.8 3 0.5 60	81.787	79.9 1.58 2 7 +0.1 3 0.0 26
84.784	142.5	0.77	2 6 +0.6 3 0.7 60	81.790	80.7 1.62 2 5 0.0 4 0.0 26
84.781	142.8	0.80	3n 0.6 60-Inch	81.787	79.7 1.62 3n 0.0 26-Inch
	STF 2555	19 36.2 +53 22			HEI 176 19 37.9 +01 30
81.637	282.2	1.86	2 5 0.0 3 0.5 26	85.587	137.6 0.23 2 5 +0.1 4 26
81.735	282.2	1.96	2 5 0.0 4 0.6 26	85.589	143.0 0.19 2 5 0.0 3 26
81.785	282.5	1.86	2 5 -0.2 3 0.6 26	85.644	139.2 0.19 2 6 +0.1 3 0.0 26
81.787	281.6	1.79	2 7 -0.2 3 0.6 26	86.660	146.8 0.26 2 5 0.0 3 26
81.736	282.1	1.87	4n 0.6 26-Inch	85.870	141.6 0.22 4n 0.0 26-Inch
	STF 2544 AB	19 37.1 +08 18		12698	A 106 19 37.9 -05 35
86.788	189.9	0.96	1 6 -0.1 3 1.2 26	80.772	230.9 1.07 2 5 +0.1 3 0.3 26
86.802	190.9	1.27	1 6 +0.1 3 1.2 26	81.785	234.5 1.04 2 5 0.0 3 0.2 26
86.805	188.6	1.21	1 5 +0.1 3 1.5 26	81.787	230.7 0.99 2 8 -0.1 3 0.2 26
86.798	189.8	1.15	3n 1.3 26-Inch	81.448	232.0 1.03 3n 0.2 26-Inch
	AC			12708	BU 249 19 38.3 +00 21
86.788	238.5	14.13	2 6 0.0 3 0.5 26	76.703	115.7 0.95 2 7 0.0 3 1.8 26
86.802	238.0	14.14	2 6 +0.1 3 0.7 26	76.728	114.4 0.93 2 5 +0.2 3 1.8 26
86.805	238.2	14.11	2 5 +0.2 3 0.8 26	77.760	115.8 1.01 2 5 +0.2 3 2.4 26
86.798	238.2	14.13	3n 0.7 26-Inch	84.648	114.0 0.96 2 5 +0.2 3 1.8 26
	VOU 34	19 37.6 -41 28		84.713	113.9 0.99 2 6 +0.1 3 1.6 26
84.787	147.3	0.14	2 7 +1.0 3 0.0 60	84.716	113.3 0.91 2 5 +0.2 3 1.4 26
84.790	143.2	0.13	2 8 +1.0 3 0.0 60	77.064	115.3 0.96 3n 2.0 26-Inch
84.793	141.2	0.12	2 7 +1.0 3 0.0 60	84.692	113.7 0.96 3n 1.6 26-Inch
84.790	143.9	0.13	3n 0.0 60-Inch	12752	STF 2556 19 39.4 +22 16
				77.763	39.6 0.33 2 6 +0.1 3 0.2 26
				78.512	35.7 0.32 2 6 0.0 3 0.3 26
				78.529	36.3 0.33 2 7 +0.1 3 0.3 26
				78.551	37.8 0.32 2 8 -0.1 3 0.3 26
				84.724	30.7 0.32 2 5 0.0 3 0.3 26
				86.690	25.7 0.40 2 6 0.0 3 0.5 26
				86.709	22.7 0.31 2 6 0.0 3 0.2 26
				86.712	23.9 0.35 2 7 0.0 3 0.4 26
				78.339	37.4 0.32 4n 0.3 26-Inch
				86.209	25.8 0.34 4n 0.3 26-Inch

No measures since 1959.

Baize, 1972: +0.1, -0.07; -0.9, -0.05.

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

12770	A 166	19 40.1 +23 31	12831	STT 383	19 43.0 +40 43
84.724	245.3	0.72 2 5 +0.1 3 0.3 26	77.574	19.3	0.92 1 6 +0.1 4 1.5 26
85.589	244.7	0.80 2 5 +0.1 3 0.1 26	77.631	14.3	0.80 1 6 +0.1 3 0.8 26
85.644	243.8	0.78 2 7 +0.2 3 0.5 26	77.746	19.2	0.90 2 7 0.0 3 1.2 26
			77.760	20.8	0.92 2 6 +0.1 3 1.0 26
85.319	244.6	0.77 3n 0.3 26-Inch	77.678	18.4	0.88 4n 1.1 26-Inch
	FIN 13	19 40.1 -31 36		RST 4047	19 43.5 -41 06
84.776	88.2	0.50 2 4 +0.8 3 0.5 60	84.773	290.0	0.21 2 6 +0.6 3 60
84.782	83.3	0.64 2 7 +0.9 3 0.7 60	84.782	296.4	0.14 2 7 +0.5 3 0.0 60
84.784	85.5	0.63 2 6 +0.7 3 0.6 60	84.784	295.9	0.16 2 5 +0.8 3 0.0 60
84.781	85.7	0.59 3n 0.6 60-Inch	84.780	294.1	0.17 3n 0.0 60-Inch
No measures for 40 years. Unchanged.			Not measured since 1947. Considerable angular increase.		
12803	STt 2574	19 40.5 +62 40	12851	STT 384	19 43.7 +38 19
80.676	252.3	0.35 2 6 -0.1 3 0.1 26	77.574	197.8	1.01 2 5 +0.1 4 0.5 26
80.700	253.2	0.38 2 4 0.0 3 0.0 26	77.631	198.6	0.95 1 5 +0.1 3 0.3 26
80.720	254.1	0.38 2 6 0.0 3 0.2 26	77.746	198.3	0.95 2 6 +0.1 3 0.6 26
80.766	253.5	0.41 2 4 0.0 3 0.0 26	77.650	198.2	0.97 3n 0.5 26-Inch
80.716	253.5	0.41 4n 0.1 26-Inch		BAZ	19 44.4 +19 29
	KUI 93	19 41.1 +13 49	86.709	158.5	1.02 2 6 0.0 3 0.3 26
86.808	307.1	0.20 2 7 0.0 3 26	86.712	158.3	0.99 2 6 0.0 3 26
86.824	302.4	0.17 2 6 +0.1 3 26	86.767	161.2	1.14 2 7 -0.3 3 0.3 26
86.830	304.6	0.20 2 7 +0.2 3 26	86.729	159.3	1.05 3n 0.3 26-Inch
86.821	304.7	0.19 3n 26-Inch		A 2389	19 44.6 +03 49
12786	BU 145	19 41.2 +30 43	12854		
79.715	273.8	1.02 2 5 0.0 3 1.5 26	80.651	123.7	0.79 2 6 0.0 3 1.8 26
79.718	272.9	0.86 2 6 +0.1 3 1.2 26	80.654	123.2	0.97 2 7 0.0 3 1.5 26
79.797	274.3	0.86 2 8 -0.3 3 1.5 26	80.657	122.0	0.87 2 5 +0.3 3 1.5 26
79.800	273.2	0.81 2 6 -0.4 3 2.2 26	80.654	123.0	0.88 3n 1.6 26-Inch
79.758	273.6	0.89 4n 1.6 26-Inch		J 1862	19 44.8 +12 51
12798	STT 382	19 41.9 +27 23	86.709	228.6	9.18 2 6 +0.2 3 0.8 26
86.808	327.9	0.33 2 7 0.0 3 0.4 26	86.712	225.1	9.07 2 6 +0.1 3 0.7 26
86.824	325.0	0.29 2 5 +0.2 3 0.4 26	86.710	226.8	9.12 2n 0.8 26-Inch
86.830	328.7	0.29 2 8 +0.3 3 0.4 26	If J's description is even approximately correct, there has been a large change.		
86.821	327.2	0.30 3n 0.4 26-Inch		HU 1608	19 44.8 -52 10
12808	STT 380	19 42.6 +11 50	84.773	50.6	0.36 1 6 +0.7 3 0.2 60
87.760	70.9	0.48 2 5 0.0 3 0.8 26	84.782	50.4	0.31 2 7 +0.6 3 0.2 60
87.788	77.0	0.41 2 5 0.0 3 0.7 26	84.784	50.5	0.30 2 5 +0.7 3 0.4 60
87.804	77.6	0.34 2 5 0.0 3 0.8 26	84.780	50.5	0.32 3n 0.3 60-Inch
87.807	75.9	0.39 2 8 -0.1 3 0.8 26			
87.790	75.4	0.40 4n 0.8 26-Inch			

165

12864	AGC 10		19 44.9 +10 46		12911	A 108	19 47.1 -08 09
87.635	140.0	0.23	2 5 0.0 3 26		78.792	84.6 0.24	2 5 +0.8 1 0.3 60
87.670	139.3	0.23	2 7 0.0 3 0.0 26		78.800	83.8 0.24	2 5 +1.0 1 0.4 60
87.760	136.4	0.26	2 6 -0.1 3 0.0 26		78.796	84.2 0.24	2n 0.4 60-Inch
87.788	136.7	0.21	2 5 -0.1 3 26		Heintz, 1985:	-1.6, -0.03.	
87.713	138.1	0.23	4n 0.0 26-Inch				
12880	STF 2579		19 45.0 +45 08		12948	DA 10	19 47.9 +24 14
79.715	234.7	2.29	2 5 0.0 3 2.6 26		80.772	312.2 0.70	2 4 0.0 3 0.8 26
79.718	231.9	2.37	2 7 0.0 3 2.8 26		80.807	308.8 0.80	2 4 +0.1 3 1.6 26
79.797	236.4	2.40	2 8 -0.6 3 2.5 26		80.810	309.9 0.58	2 5 +0.1 3 1.2 26
79.800	236.0	2.34	2 6 -0.5 3 2.5 26		80.796	310.3 0.69	3n 1.2 26-Inch
85.559	230.8	2.40	2 7 0.0 3 3.2 26		12957	STF 2584	19 48.4 +22 12
85.587	229.7	2.42	2 5 0.0 4 3.0 26		78.721	295.0 1.87	2 5 0.0 3 0.0 26
85.589	230.5	2.42	2 5 0.0 3 3.0 26		78.737	294.4 1.83	2 5 0.0 3 0.1 26
85.644	231.5	2.48	2 7 0.0 3 2.8 26		79.693	294.7 1.88	2 4 -0.3 3 0.1 26
87.788	228.7	2.25	2 5 -0.2 3 3.0 26		79.050	294.7 1.86	3n 0.1 26-Inch
87.804	229.5	2.29	2 5 -0.2 3 3.0 26		12972	STT 387	19 48.7 +35 19
87.807	228.6	2.38	2 8 -0.2 3 3.0 26		79.715	171.5 0.65	2 5 +0.1 3 0.8 26
87.818	231.8	2.16	2 5 -0.2 3 3.0 26		79.718	171.9 0.68	2 7 0.0 3 0.7 26
79.758	234.8	2.35	4n 2.6 26-Inch		79.789	171.3 0.55	2 5 +0.2 3 0.4 26
85.595	230.6	2.43	4n 3.0 26-Inch		79.741	171.6 0.63	3n 0.6 26-Inch
87.804	229.6	2.27	4n 3.0 26-Inch		Rabe, 1948:	+2.6, +0.05.	
Baize, 1973:	+1.3, +0.01;	+0.5, +0.04;			Baize, 1961:	+3.8, +0.03.	
	+1.9, -0.13.						
Scardia, 1983:	-0.1, -0.08;	-1.2, -0.05;					
	-1.0, -0.22.						
12889	STF 2576		19 45.6 +33 37		12961	A 1658	19 48.7 +15 04
77.574	181.4	2.10	2 6 +0.1 4 0.0 26		77.763	252.5 0.22	2 6 +0.3 3 0.2 26
77.631	181.6	2.00	2 6 +0.1 3 0.1 26		78.512	241.4 0.20	2 5 +0.1 3 26
77.746	182.0	1.92	2 7 +0.1 3 0.0 26		78.529	242.5 0.19	2 7 0.0 3 0.4 26
79.715	178.7	2.17	2 5 0.0 3 26		81.787	222.5 0.18	2 8 0.0 4 0.3 26
79.718	177.6	2.04	2 7 +0.1 3 0.0 26		81.790	222.5 0.19	2 6 -0.3 4 0.2 26
79.789	179.2	1.99	2 5 +0.2 3 0.2 26		81.804	223.8 0.23	2 5 -0.2 3 26
81.637	176.2	2.14	2 5 0.0 3 0.0 26		81.807	220.2 0.20	2 6 -0.1 4 0.3 26
81.645	177.2	2.22	2 4 0.0 3 0.1 26		84.713	216.4 0.22	2 6 +0.2 3 26
81.656	176.8	2.12	2 5 +0.1 4 0.1 26		84.716	211.9 0.20	2 6 +0.1 3 0.3 26
81.733	176.9	2.17	2 3 -0.2 3 0.2 26		84.724	215.2 0.19	2 6 +0.1 3 0.4 26
85.559	172.2	2.13	2 7 +0.1 3 0.0 26		78.268	245.5 0.20	3n 0.3 26-Inch
85.587	172.6	2.18	2 5 -0.2 4 0.0 26		81.797	222.2 0.20	4n 0.3 26-Inch
85.589	173.3	2.17	2 6 +0.2 3 0.0 26		84.718	214.5 0.20	3n 0.4 26-Inch
85.644	173.8	2.31	2 7 +0.1 3 0.0 26		Couteau, 1963:	-1.6, -0.02; -9.6, -0.01;	
77.650	181.7	2.01	3n 0.0 26-Inch			-4.3, -0.01.	
79.741	178.5	2.07	3n 0.1 26-Inch				
81.668	176.8	2.16	4n 0.0 26-Inch				
85.595	173.0	2.20	4n 0.0 26-Inch				
Rabe, 1948:	+2.6, +0.06;	+1.4, +0.04;					
	+1.5, +0.06;	+0.9, -0.03.					

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

12973	AGC 11	19 48.9 +19 08	13024	HU 684	19 50.7 +48 51
86.808	179.8 0.22	1 8 -0.1 3 0.8 26	80.676	152.9 0.31	2 6 -0.1 3 0.3 26
86.824	173.9 0.24	1 6 +0.2 3 0.6 26	80.700	157.0 0.36	2 4 -0.1 3 0.0 26
86.830	173.7 0.23	3 7 +0.2 3 0.8 26	80.720	150.4 0.28	2 7 -0.1 3 0.1 26
86.849	171.6 0.22	2 8 +0.4 3 0.7 26	80.766	153.2 0.33	2 7 -0.1 3 0.2 26
86.828	174.8 0.23	4n 0.7 26-Inch	80.716	153.4 0.32	4n 0.0 26-Inch
Heintz, 1984: +0.8, 0.00. Tokovinen, 1984: -1.5, +0.04.			12994	OL 24	19 50.7 -26 10
12986	A 718 BC	19 49.0 +44 23	84.776	38.9 1.12	2 5 +0.7 3 0.3 60
79.797	33.1 0.23	2 8 -0.3 4 0.5 26	84.784	37.6 1.19	2 5 +0.9 3 0.6 60
79.800	37.4 0.20	2 6 -0.3 3 0.3 26	84.790	37.5 1.09	2 8 +1.1 3 0.1 60
79.808	45.6 0.22	2 6 -0.3 3 0.6 26	84.783	38.0 1.13	3n 0.3 60-Inch
80.659	38.5 0.21	1 7 -0.1 3 0.2 26	13030	BU 978	19 51.5 +23 31
80.016	38.6 0.22	4n 0.4 26-Inch	80.772	58.0 1.15	2 5 0.0 3 0.0 26
I 120 19 49.2 -61 49			80.807	59.8 1.10	2 4 +0.1 3 0.0 26
78.773	133.4 0.48	2 7 0.0 1 0.1 36	80.810	57.8 1.09	2 4 +0.1 3 0.0 26
78.776	134.4 0.45	2 4 0.0 1 0.1 36	80.796	58.5 1.11	3n 0.0 26-Inch
78.781	131.2 0.41	2 4 +0.3 1 0.3 36	13027	A 376	19 51.7 +07 38
84.773	118.6 0.44	2 6 +0.7 3 60	77.763	129.5 2.21	2 6 0.0 3 0.5 26
84.782	120.5 0.39	2 6 +0.9 3 0.2 60	78.551	128.3 2.10	2 7 -0.1 3 0.6 26
84.784	122.6 0.40	2 5 +0.8 3 0.3 60	78.642	128.7 2.14	2 5 0.0 3 0.4 26
84.790	120.2 0.36	2 8 +1.1 3 0.2 60	78.319	128.8 2.14	3n 0.5 26-Inch
78.777	133.0 0.45	3n 0.2 36-Inch	13028	BU 148	19 52.0 -10 21
84.782	120.5 0.40	4n 0.2 60-Inch	80.651	254.8 0.61	2 5 +0.1 3 0.4 26
Wierzbinski, 1957: +5.2, +0.06; +10.5, +0.11.			80.654	254.8 0.60	2 7 0.0 3 0.4 26
I 658 19 49.5 -55 25			80.657	255.1 0.53	2 5 +0.2 3 0.4 26
78.773	155.3 0.93	2 5 +0.2 1 0.6 36	80.654	254.9 0.58	3n 0.4 26-Inch
78.776	160.2 0.93	2 4 +0.2 1 0.4 36	Popovic, 1983: +8.7, +0.02.		
78.781	158.1 0.87	2 4 +0.5 1 36	13055	HO 580	19 52.5 +22 27
78.777	157.9 0.91	3n 0.5 36-Inch	80.651	275.7 0.81	2 6 0.0 3 0.4 26
Heintz, 1973: -0.6, -0.09.			80.654	276.7 0.68	2 7 0.0 3 0.4 26
13005	BU 361	19 50.3 +22 40	80.657	275.4 0.72	2 6 +0.2 3 0.3 26
84.623	347.8 3.70	2 8 0.0 3 0.3 26	80.654	275.4 0.72	3n 0.4 26-Inch
84.713	349.0 3.75	2 6 +0.2 3 0.2 26	13059	A 1660 ABXC	19 52.9 +14 26
84.668	348.4 3.72	2n 0.2 26-Inch	77.760	213.0 0.60	2 6 +0.1 3 0.2 26
COU 1034 19 50.4 +24 09			77.763	209.0 0.56	1 6 +0.1 3 0.3 26
86.463	209.4 0.23	2 6 0.0 3 0.0 26	78.512	207.3 0.56	2 5 +0.1 3 0.2 26
86.660	214.2 0.25	2 6 0.0 3 26	78.529	208.8 0.59	2 6 +0.1 3 0.4 26
86.690	208.2 0.27	2 6 0.0 3 26	78.141	209.5 0.58	4n 0.3 26-Inch
86.712	212.6 0.27	2 7 +0.1 3 0.0 26	The close pair AB was measured by Aitken on three nights in 1931. It has never been seen subsequently.		
86.631	211.1 0.26	4n 0.0 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

167

13074	J 25	19 53.4 +29 23	13104	STF 2597	19 55.4 -06 44
80.654	180.7	1.72 2 7 +0.1 3 0.1 26	79.797	323.5	0.13 3 7 -0.1 4 1.0 26
80.657	181.8	1.63 2 6 +0.3 3 0.0 26	79.800	351.9	0.15 1 6 -0.1 5 1.0 26
80.676	181.4	1.64 2 7 0.0 3 0.0 26	79.808	342.0	0.15 1 6 -0.1 3 0.8 26
80.662	181.3	1.66 3n 0.0 26-Inch	79.802	340:	0.14: 3n 0.9 26-Inch
	DJU	19 53.4 +24 05	Obviously very difficult and uncertain.		
78.680	248.6	1.10 2 6 0.0 3 2.2 26		RST 2123	19 56.2 -31 00
78.721	252.0	1.08 2 6 0.0 3 2.2 26	84.776	196.3	1.61 2 5 +0.7 3 0.4 26
79.715	252.8	1.28 2 5 +0.1 3 2.5 26	84.784	194.2	1.65 2 5 +0.9 3 0.2 26
79.797	249.7	1.01 2 8 -0.6 3 2.0 26	84.790	195.5	1.56 2 7 +0.8 3 0.0 26
79.228	250.8	1.12 4n 2.2 26-Inch	84.783	195.3	1.61 3n 0.2 60-Inch
	I 1406	19 53.5 -30 17	13156	A 604	19 57.3 +05 13
84.790	0.0	0.22 2 8 +1.0 3 0.3 60	78.551	79.6	0.14 2 7 0.0 3 0.0 26
84.793	2.0	0.21 2 7 +0.9 3 0.4 60	78.642	87.7	0.21 2 5 0.0 3 0.0 26
84.792	1.0	0.22 2n 0.4 60-Inch	78.644	76.5	0.17 2 6 0.0 3 0.0 26
No measures since 1960. A large increase in angle with distance decreasing.			78.680	85.0	0.20 2 5 +0.1 3 0.0 26
13082	STF 2596	19 54.0 +15 18	85.559	72.2	0.21 2 6 0.0 3 26
81.637	305.3	2.01 2 5 0.0 3 1.3 26	85.589	85.8	0.19 2 5 0.0 3 26
81.645	307.0	2.04 2 4 0.0 3 1.4 26	85.644	80.9	0.20 2 6 +0.1 3 26
81.650	306.5	1.94 2 5 0.0 5 1.7 26	78.629	82.2	0.18 4n 0.0 26-Inch
81.653	306.6	2.00 2 8 0.0 3 1.8 26	85.597	79.6	0.20 3n 26-Inch
81.646	306.4	2.00 4n 1.6 26-Inch	Zaera, 1982: +4.0, -0.03; +8.5, +0.02.		
13086	J 1291	19 54.3 +02 44	13165	BU 425	19 57.5 +20 18
84.719	338.6	3.10 2 5 +0.1 3 0.4 26	81.637	240.7	1.29 2 4 0.0 3 26
87.635	339.1	3.14 1 5 0.0 3 0.7 26	81.653	240.0	1.40 2 7 0.0 3 0.0 26
87.760	338.5	3.10 2 5 -0.1 3 1.0 26	81.735	244.4	1.31 2 5 0.0 4 26
86.705	338.7	3.11 3n 0.7 26-Inch	81.785	242.4	1.48 2 5 -0.1 3 0.3 26
13125	HO 581	19 55.0 +41 52	81.702	241.9	1.37 4n 0.2 26-Inch
77.574	106.9	0.30 2 5 +0.1 4 0.6 26	13161	A 1662	19 57.5 +14 08
77.631	107.1	0.29 2 5 +0.1 3 0.5 26	84.648	195.1	0.31 2 5 +0.2 3 0.0 26
77.746	111.6	0.31 3 7 0.0 3 0.5 26	84.713	198.4	0.26 2 6 +0.1 3 0.0 26
79.797	122.0	0.29 2 8 -0.3 4 0.5 26	84.716	196.2	0.28 2 5 +0.2 3 0.0 26
79.800	127.6	0.28 2 6 -0.4 3 0.5 26	87.635	196.4	0.31 2 5 0.0 3 26
79.808	121.4	0.30 2 6 -0.3 3 0.5 26	87.760	197.1	0.23 2 5 0.0 3 26
81.656	144.8	0.23 2 5 +0.1 4 0.6 26	87.788	197.5	0.24 2 5 -0.1 3 26
81.735	140.2	0.25 2 5 -0.1 4 0.7 26	87.804	195.5	0.34 2 5 0.0 3 26
81.785	136.6	0.24 2 5 -0.2 3 0.8 26	87.807	195.0	0.36 2 7 0.0 3 0.3 26
81.787	146.1	0.25 2 8 0.0 4 0.8 26	84.692	196.6	0.28 3n 0.0 26-Inch
77.650	108.5	0.30 3n 0.6 26-Inch	87.759	196.3	0.30 5n 0.3 26-Inch
79.802	123.7	0.29 3n 0.5 26-Inch	13166	A 1663	19 57.6 +15 24
81.741	141.9	0.24 4n 0.7 26-Inch	87.788	237.9	1.30 2 5 0.0 3 0.2 26
Van Biesbroeck, 1927: +2.0, -0.04; +1.6, -0.02; +3.0, -0.04.			87.804	236.3	1.21 2 5 -0.1 3 0.3 26
			87.807	236.5	1.23 2 8 -0.1 3 0.2 26
			87.818	241.1	1.41 2 5 +0.1 3 0.4 26
			87.804	238.0	1.29 4n 0.3 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

13183	ROE	19 57.9 +35 55	13212	A 378	19 59.3 +32 06
81.785	44.3 1.50	2 5 +0.1 3 1.0 26	81.804	298.0 0.81	2 5 -0.1 3 0.5 26
81.787	42.3 1.49	2 7 +0.1 3 1.0 26	81.807	298.7 0.88	2 6 -0.0 3 0.6 26
81.790	43.7 1.56	2 5 -0.1 4 1.2 26	81.826	297.1 0.84	2 7 +0.1 3 0.4 26
81.787	43.4 1.56	3n 1.1 26-Inch	81.812	297.9 0.84	3n 0.5 26-Inch
This is the only measure since discovery.					
13176	AC 16	19 57.9 +27 15	13242	STF 2623	19 59.6 +59 28
81.637	236.0 0.40	2 5 0.0 3 0.3 26	80.720	103.2 1.61	2 5 0.0 3 1.4 26
81.735	237.2 0.36	2 5 0.0 4 0.4 26	80.769	101.1 1.69	2 6 -0.1 3 1.2 26
81.785	235.8 0.36	2 5 0.0 3 0.4 26	80.772	106.1 1.52	2 5 0.0 3 1.8 26
81.787	235.8 0.43	2 7 0.0 4 0.3 26	80.810	104.7 1.53	2 5 +0.1 3 1.8 26
81.736	236.2 0.39	4n 0.4 26-Inch	80.768	103.8 1.59	4n 1.6 26-Inch
13169	A 606	19 58.1 +04 56	13223	BU 1133	19 59.6 +31 49
78.551	304.4 0.42	2 8 +0.1 3 0.2 26	81.804	347.4 1.23	2 5 0.0 3 2.7 26
78.642	306.2 0.41	2 5 +0.1 3 0.0 26	81.807	346.7 1.16	2 6 0.0 4 2.8 26
78.644	306.5 0.40	2 6 +0.1 3 0.0 26	81.826	343.3 1.12	2 7 +0.2 3 1.6 26
86.767	312.9 0.53	2 7 0.0 3 0.0 26	81.812	345.8 1.17	3n 2.4 26-Inch
86.802	315.3 0.59	2 6 0.0 3 0.2 26	COU 1166 19 59.8 +28 30		
86.808	315.1 0.52	2 8 -0.1 3 0.0 26	86.463	180.2 0.75	2 6 0.0 3 0.0 26
86.824	321.4 0.49	2 5 +0.1 3 26	86.709	183.2 0.65	2 7 0.0 3 0.2 26
78.612	305.7 0.41	3n 0.1 26-Inch	86.712	180.2 0.74	2 7 0.0 3 0.2 26
86.800	316.2 0.53	4n 0.1 26-Inch	86.802	179.1 0.79	2 6 0.0 3 0.2 26
Zaera, 1982: -0.6, -0.05; +1.1, +0.05.			86.672	180.7 0.73	4n 0.2 26-Inch
Baize, 1984: -0.1, -0.06; +0.7, +0.08.			13220	A 2393	20 00.1 +03 38
13184	AG 244	19 58.3 +22 08	79.797	91.3 0.11	2 7 0.0 4 0.8 26
81.790	276.8 1.42	2 5 0.0 4 1.2 26	80.654	64: 0.13	2 7 0.0 3 26
81.804	276.1 1.52	2 5 -0.2 3 1.3 26	These are the only observations since a single measure by Van Biesbroeck showed the pair closed in. Uncertain and quadrant indeterminate.		
81.807	275.9 1.42	2 6 -0.1 4 1.3 26	13234	HU 352	20 00.3 +17 56
81.800	276.3 1.45	3n 1.3 26-Inch	79.797	238.3 0.14	2 7 0.0 4 0.0 26
13178	AC 12	19 58.4 -02 14	79.800	202.4 0.18	2 5 0.0 4 26
79.797	305.6 1.47	2 8 -0.1 4 0.5 26	80.654	218.7 0.16	2 7 +0.1 3 26
79.800	305.6 1.38	2 6 -0.1 5 0.8 26	80.676	224.9 0.15	2 7 +0.2 4 26
79.808	304.7 1.48	2 6 0.0 3 0.7 26	80.232	221: 0.16	4n 26-Inch
87.788	302.7 1.39	2 5 0.0 3 0.6 26	Difficult.		
87.804	301.1 1.30	2 5 0.0 3 0.8 26	13239	A 1664	20 00.5 +13 17
87.807	302.4 1.37	2 7 0.0 3 0.7 26	78.721	76.1 0.56	2 6 0.0 3 0.3 26
87.818	303.6 1.35	2 5 0.0 3 1.0 26	78.737	73.4 0.59	2 5 0.0 3 0.5 26
79.802	305.3 1.44	3n 0.7 26-Inch	79.718	73.9 0.49	2 7 0.0 3 0.5 26
87.804	302.4 1.35	4n 0.8 26-Inch	79.059	74.5 0.55	3n 0.4 26-Inch
13196	STF 2606	19 58.6 +33 16			
80.659	141.3 0.94	2 7 0.0 3 0.4 26			
80.676	140.9 0.89	2 7 0.0 3 0.8 26			
80.700	141.6 1.00	2 4 0.0 3 0.7 26			
80.678	141.3 0.94	3n 0.6 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

169

	RST 1054		20 00.8 -46 35		I 1490		20 03.3 -42 55
84.773	339.4	0.27	2 6 +0.7 3 60	84.795	154.6	0.84	2 6 +0.4 3 0.8 36
84.782	342.2	0.30	2 6 +0.7 3 0.2 60	84.798	153.0	0.80	2 6 +0.5 4 1.2 36
84.787	346.9	0.32	2 7 +0.7 3 0.5 60	84.801	149.5	0.84	2 7 +0.4 4 0.8 36
84.781	342.8	0.30	3n 0.4 60-Inch	84.798	152.4	0.83	3n 0.9 36-Inch
Increase in both angle and separation.							
13262	BU 1289		20 01.0 +37 42	13313	A 380		20 03.6 +32 20
81.804	46.1	0.60	2 4 +0.1 3 0.8 26	85.589	203.2	0.65	1 6 +0.1 3 26
81.807	52.6	0.72	2 6 +0.1 4 0.9 26	86.660	203.0	0.60	2 6 0.0 3 0.1 26
81.826	51.4	0.63	2 7 +0.2 3 0.8 26	86.690	203.1	0.61	2 5 0.0 3 26
81.812	50.0	0.65	3n 0.8 26-Inch	86.313	203.1	0.62	3n 0.1 26-Inch
Decrease in separation. Angle unchanged.							
13270	A 720		20 01.2 +48 21	13314	A 1194		20 04.0 +12 21
80.720	93.6	0.54	2 5 +0.1 3 0.1 26	87.760	316.8	0.95	2 5 0.0 3 0.2 26
80.766	91.9	0.52	2 6 0.0 3 0.0 26	87.788	315.5	0.86	2 5 0.0 3 0.1 26
80.810	86.8	0.47	2 5 +0.2 3 0.2 26	87.804	318.6	0.83	2 5 0.0 3 26
80.765	90.8	0.51	3n 0.1 26-Inch	87.807	313.6	0.99	1 7 0.0 3 0.1 26
	HDO 294		20 01.2 -38 36	87.790	316.1	0.91	4n 0.1 26-Inch
78.770	19.3	1.02	2 6 +0.2 1 0.8 36	13320	STF 2620		20 04.1 +11 48
78.773	18.6	0.94	1 6 0.0 1 1.0 36	82.825	288.3	1.70	2 6 +0.1 3 0.6 26
78.781	22.1	0.97	2 4 +0.4 1 0.6 36	85.589	289.7	1.82	2 6 +0.1 3 0.6 26
84.776	20.9	1.10	2 5 +0.8 3 0.7 60	85.644	289.8	1.97	2 6 0.0 3 0.8 26
84.784	22.7	1.08	2 5 +0.9 3 0.8 60	84.686	289.3	1.83	3n 0.7 26-Inch
84.790	21.2	0.97	2 8 +1.1 3 0.4 60	13329	STF 2626		20 04.2 +30 33
78.775	20.0	0.98	3n 0.8 36-Inch	79.808	127.6	1.03	2 5 0.0 3 0.1 26
84.783	21.6	1.05	3n 0.6 60-Inch	79.833	128.6	1.09	2 8 0.0 3 0.2 26
Dommanget, 1978: -3.3, +0.04; -4.5, +0.04.							
13259	H 93		20 01.6 -00 12	79.846	125.1	1.09	2 8 +0.2 3 0.2 26
82.825	296.8	1.90	2 6 0.0 3 0.8 26	79.852	128.2	1.14	2 5 +0.3 3 0.1 26
85.559	300.0	1.87	2 6 0.0 3 0.4 26	79.835	127.4	1.09	4n 0.2 26-Inch
85.589	298.9	1.87	2 5 0.0 3 1.2 26	13337	A 608		20 05.1 +05 46
84.658	298.6	1.88	3n 0.8 26-Inch	76.689	12.3	1.40	1 5 +0.1 3 2.5 26
13277	STT 395		20 02.0 +24 56	78.680	15.8	1.58	1 5 +0.3 3 2.4 26
79.800	120.2	0.91	2 7 -0.3 3 0.4 26	78.721	15.8	1.39	1 6 +0.1 3 3.4 26
79.808	119.7	0.81	2 7 -0.1 3 0.3 26	78.030	14.6	1.46	3n 2.4 26-Inch
79.827	118.4	1.02	2 5 +0.4 3 0.5 26	13334	BU 56		20 05.1 -04 19
79.830	119.8	0.95	2 5 -0.3 3 0.4 26	78.792	179.8	1.40	1 5 +0.7 1 1.0 60
86.463	119.4	0.94	2 6 +0.1 3 0.2 26	78.800	179.8	1.51	1 5 +0.1 1 1.5 60
86.660	120.8	0.93	2 6 0.0 3 0.5 26	78.796	179.8	1.46	2n 1.2 60-Inch
86.690	121.2	0.88	2 5 0.0 3 26				
86.709	119.0	0.92	2 6 0.0 3 0.4 26				
79.816	119.5	0.92	4n 0.4 26-Inch				
86.630	120.1	0.92	4n 0.4 26-Inch				

13392	STF 2642		20 05.5 +63 42		RST 2134		20 08.1 -39 30
76.788	183.1	1.88	1 5 0.0 3 0.2 26	84.782	328.8	0.12	2 7 +0.7 3 0.0 60
77.574	183.9	1.99	1 5 0.0 4 0.0 26	84.787	323.6	0.12	2 7 +0.7 3 0.0 60
77.631	183.5	2.00	1 5 0.0 3 0.1 26	84.790	310.6	0.11	2 8 +1.1 3 0.0 60
77.331	183.5	1.96	3n 0.1 26-Inch	84.793	317.8	0.13	2 8 +0.7 3 0.0 60
13355	HLD 156		20 06.2 +01 59	84.788	320.2	0.12	4n 0.0 60-Inch
77.760	256.2	1.29	2 6 0.0 3 0.3 26	No measures since 1947. If the quadrant is correct, half the orbit has been covered.			
77.763	257.4	1.30	2 6 0.0 3 0.7 26	13412	J 1168		20 08.2 +21 05
78.512	256.6	1.21	2 5 0.0 3 0.4 26	77.760	195.4	0.75	2 6 0.0 3 0.6 26
78.012	256.7	1.27	3n 0.4 26-Inch	77.763	194.7	0.75	2 6 0.0 3 0.6 26
13384	BU 428		20 06.7 +12 56	78.551	191.6	0.85	1 8 0.0 3 0.6 26
79.808	356.1	0.91	1 6 0.0 3 1.0 26	78.025	193.9	0.78	3n 0.6 26-Inch
79.830	356.5	0.87	1 6 -0.2 3 1.2 26	13404	I 1413		20 08.4 -27 01
79.833	355.6	0.81	1 8 -0.2 3 1.4 26	78.770	88.7	3.57	2 6 +0.1 1 2.8 36
79.824	356.1	0.86	3n 1.2 26-Inch	78.773	90.7	3.79	2 6 +0.2 1 3.5 36
13357	SEE 405		20 06.7 -28 22	78.776	92.1	3.70	2 5 +0.4 1 3.5 36
78.770	237.7	0.51	2 6 0.0 1 0.5 36	78.773	90.5	3.69	3n 3.2 36-Inch
78.773	236.2	0.37	2 6 +0.1 1 0.7 36	13449	STF 2652		20 09.0 +62 05
78.776	238.5	0.40	2 4 +0.3 1 0.2 36	81.637	221.4	0.33	2 5 +0.1 3 26
78.773	237.5	0.43	3n 0.5 36-Inch	81.653	220.1	0.30	2 6 0.0 3 0.3 26
13389	A 609		20 07.1 +07 59	81.735	221.9	0.27	2 4 0.0 4 26
78.644	308.9	0.36	2 6 0.0 3 0.2 26	81.785	220.6	0.31	2 4 +0.1 3 26
78.721	308.8	0.37	2 6 +0.2 3 0.3 26	81.702	221.0	0.30	4n 0.3 26-Inch
78.737	307.8	0.43	2 5 0.0 3 0.2 26		HU 1611		20 09.2 -62 10
78.701	308.5	0.39	3n 0.2 26-Inch	78.770	294.3	1.57	2 4 +0.3 1 1.3 36
13405	STT 398		20 07.4 +35 43	78.773	296.4	1.50	2 6 +0.3 1 2.5 36
81.637	85.8	1.13	2 5 0.0 3 1.5 26	78.776	295.8	1.52	2 4 0.0 1 2.8 36
81.735	84.3	1.03	2 4 -0.1 4 1.8 26	78.773	295.5	1.53	3n 2.2 36-Inch
81.785	83.4	1.03	2 5 0.0 3 1.4 26	13433	BAR		20 09.3 +25 03
81.790	83.7	1.02	2 5 -0.1 4 1.8 26	77.760	299.1	0.80	2 5 +0.1 3 0.4 26
81.737	84.3	1.05	4n 1.6 26-Inch	77.763	299.5	0.97	2 6 +0.1 3 0.4 26
13415	A 382		20 08.0 +42 23	78.512	298.2	0.95	2 5 +0.1 3 0.1 26
86.788	98.9	1.57	2 6 -0.3 3 2.2 26	78.012	298.9	0.91	3n 0.3 26-Inch
86.802	97.6	1.68	2 6 0.0 3 2.4 26		VOU 81		20 09.3 -31 54
86.808	96.7	1.69	2 7 -0.2 3 2.7 26	84.776	128.6	3.62	2 5 +0.8 3 2.4 60
86.824	98.4	1.59	2 5 0.0 3 3.0 26	84.784	126.7	3.64	2 5 +0.9 3 2.5 60
86.806	97.9	1.63	4n 2.6 26-Inch	84.780	127.6	3.63	2n 2.4 60-Inch
	RST 2135		20 08.0 -31 11	This is the only measure since discovery in 1934. Increase in angle.			
78.784	180.1	0.82	2 7 +0.5 1 1.2 36				
78.789	179.5	0.96	2 7 +0.8 1 0.8 36				
78.786	179.8	0.89	2n 1.0 36-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

171

13447	STF 2645	20 09.4 +51 41		HDO 295	20 11.1 -57 31
81.637	138.8	1.90	2 5 0.0 3 0.8 26	78.770	266.9 0.59 2 5 +0.2 1 0.7 36
81.653	139.5	1.58	2 6 -0.1 3 0.2 26	78.773	266.4 0.47 2 6 +0.4 1 0.6 36
81.656	140.7	1.63	2 5 -0.1 4 0.5 26	78.776	264.6 0.39 2 4 +0.1 1 0.7 36
81.735	137.7	1.63	2 4 +0.1 4 0.4 26	78.784	265.5 0.51 2 7 +0.1 1 0.8 36
81.670	139.2	1.68	4n 0.5 26-Inch	78.776	265.8 0.49 4n 0.7 26-Inch
13461	STT 400	20 10.2 +43 57		13493	BU 1205 20 12.3 -08 05
77.574	107.1	0.20	2 5 0.0 4 0.4 26	78.792	224.5 0.24 2 5 +0.7 1 1.3 60
77.631	108.6	0.22	1 6 0.0 3 0.6 26	78.800	221.6 0.20 2 4 +0.9 1 0.8 60
77.746	106.8	0.20	2 6 0.0 3 0.5 26	78.803	228.8 0.21 2 5 +0.9 1 1.4 60
79.718	88.5	0.18	2 6 0.0 3 0.8 26	78.798	225.0 0.22 3n 1.2 60-Inch
79.797	90.3	0.19	3 8 0.0 4 0.8 26	13517	A 1201 20 12.4 +29 08
79.800	84.2	0.19	1 6 0.0 4 0.8 26	78.721	167.3 0.32 2 5 +0.2 3 0.4 26
79.808	91.0	0.22	3 5 0.0 3 0.6 26	79.718	158.4 0.26 2 7 0.0 3 0.4 26
80.676	80.6	0.19	3 7 0.0 4 1.0 26	79.747	155.9 0.30 2 8 0.0 4 0.8 26
80.720	79.2	0.19	2 6 0.0 3 1.0 26	79.412	160.5 0.29 3n 0.5 26-Inch
80.766	71.3	0.20	2 6 -0.1 3 1.0 26	13519	A 722 20 12.8 +12 10
81.653	62.7	0.22	2 6 +0.1 3 0.8 26	82.825	342.5 2.61 2 5 +0.1 3 0.3 26
81.785	61.1	0.20	2 5 0.0 3 0.8 26	85.559	343.0 2.53 2 6 0.0 3 0.0 26
81.787	61.2	0.18	2 8 0.0 4 1.0 26	85.589	343.7 2.62 2 6 0.0 3 0.4 26
81.807	63.9	0.20	2 6 0.0 4 0.8 26	84.658	343.1 2.59 3n 0.2 26-Inch
84.623	34.7	0.26	2 6 -0.1 3 26	13530	A 1203 BC 20 12.9 +29 12
84.648	27.6	0.27	2 6 +0.1 3 1.0 26	78.551	2.4 0.41 2 7 +0.1 3 0.2 26
86.712	21.9	0.21	2 6 0.0 3 1.2 26	78.644	4.3 0.49 2 6 +0.1 3 0.8 26
86.767	17.5	0.24	2 8 0.0 3 0.8 26	79.833	4.2 0.41 1 7 0.0 3 0.5 26
86.788	24.2	0.22	4 6 -0.4 3 1.0 26	79.001	3.6 0.44 3n 0.5 26-Inch
86.802	19.5	0.25	2 7 0.0 3 0.8 26	13533	A 1202 20 13.4 +10 47
77.650	107.5	0.21	3n 0.5 26-Inch	78.737	120.6 0.75 2 4 0.0 2 0.2 26
79.781	88.5	0.19	4n 0.8 26-Inch	79.718	118.2 0.70 2 5 +0.1 3 0.4 26
80.721	77.0	0.19	3n 1.0 26-Inch	79.747	120.7 0.78 2 8 +0.2 4 0.4 26
81.758	62.2	0.20	4n 0.9 26-Inch	79.417	119.8 0.74 3n 0.3 26-Inch
84.636	31.2	0.26	2n 1.0 26-Inch		HJ 5178 20 13.7 -34 07
86.767	20.8	0.23	4n 1.0 26-Inch	84.795	8.4 2.77 2 7 +0.8 4 1.5 36
Heintz, 1985:	-0.4, 0.00; -1.9, 0.00;			84.798	7.4 2.74 2 7 +0.4 4 1.5 36
	-4.5, 0.00; -9.0, +0.02;			84.801	9.5 2.79 2 7 +0.5 4 1.2 36
	-12.5, +0.06, -3.0, 0.00.			84.798	8.4 2.77 3n 1.4 36-Inch
This orbit is no improvement over Heintz's 1963 version.				13542	STF 2651 20 13.8 +16 09
13448	FOX 33	20 10.2 +25 36		80.657	279.6 1.25 2 6 +0.1 3 0.1 26
82.825	105.9	1.05	2 5 +0.1 3 1.2 26	80.659	280.7 1.32 2 8 0.0 3 0.1 26
85.644	100.4	1.06	2 6 0.0 3 1.7 26	80.676	279.4 1.29 2 7 0.0 4 0.0 26
86.463	100.4	0.98	2 5 0.0 3 1.2 26	80.664	279.9 1.29 3n 0.1 26-Inch
84.977	102.2	1.03	3n 1.4 26-Inch		
	COU 1629	20 10.4 +33 56			
87.760	156.1	1.52	2 5 0.0 3 0.4 26		
87.788	155.9	1.37	2 5 0.0 3 0.6 26		
87.804	156.6	1.52	2 4 0.0 3 1.0 26		
87.818	153.1	1.52	2 5 0.0 3 0.7 26		
87.792	155.4	1.48	4n 0.7 26-Inch		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

	POP 138			20 13.9 +45 39			13657	A 1670			20 18.2 +15 12		
86.788	34.6	0.52		2 6	-0.2	3 0.2 26	80.659	214.5	0.27		2 8	0.0	3 0.4 26
86.802	39.5	0.54		2 6	+0.1	3 0.2 26	80.676	210.9	0.29		2 7	0.0	4 0.8 26
86.808	33.4	0.51		2 7	-0.1	3 0.0 26	80.720	208.6	0.31		2 6	-0.1	3 0.3 26
86.799	35.8	0.52		3n	0.1	26-Inch	80.685	211.3	0.29		3n	0.5	26-Inch
13564	A 1204			20 14.4 +31 29			13681	A 286 AB			20 18.7 +35 07		
84.719	137.1	0.31		2 5	0.0	3 26	80.720	47.9	0.20		2 5	0.0	3 0.0 26
84.724	133.3	0.30		2 6	+0.1	3 0.4 26	81.787	48.9	0.16		2 7	0.0	4 0.0 26
85.559	135.6	0.36		2 6	-0.1	3 0.3 26	81.807	55.5	0.18		2 6	-0.1	4 0.0 26
85.000	135.3	0.32		3n	0.3	26-Inch	81.826	49.2	0.18		2 7	0.0	4 26
							81.535	50.4	0.18		4n	0.0	26-Inch
13614	BU 59			20 16.6 +05 07				BU 986 ABXC					
87.788	105.1	8.35		2 5	0.0	3 2.0 26	80.720	240.8	4.28		2 5	+0.1	3 1.5 26
87.804	104.4	8.42		2 5	0.0	3 1.8 26	81.787	240.3	4.36		2 7	+0.1	4 2.0 26
87.807	103.0	8.52		2 7	0.0	3 2.0 26	81.807	240.9	4.48		2 6	0.0	4 2.4 26
87.800	104.2	8.43		3n	1.9	26-Inch	81.826	240.6	4.55		2 7	+0.1	4 2.5 26
							81.535	240.6	4.42		4n	2.1	26-Inch
13637	A 284			20 16.9 +32 35			13679	A 285			20 18.8 +21 42		
80.810	256.4	0.42		2 5	0.0	3 0.3 26	86.808	300.7	3.29		2 7	-0.1	3 3.0 26
81.787	254.1	0.45		2 8	0.0	4 0.4 26	86.824	301.4	3.22		2 5	0.0	3 2.7 26
81.807	258.1	0.49		2 6	0.0	4 0.3 26	86.830	303.0	3.18		2 7	0.0	3 3.0 26
81.468	256.2	0.45		3n	0.3	26-Inch	86.821	301.7	3.23		3n	2.9	26-Inch
	STN 64			20 16.9 -32 37			13693	BU 1206			20 19.2 +36 45		
78.776	302.2	1.88		2 5	+0.4	1 0.2 36	76.728	356.6	2.27		2 6	0.0	3 3.5 26
78.781	300.7	2.00		2 5	+0.4	1 0.1 36	77.631	358.3	2.17		2 5	0.0	3 3.5 26
78.789	301.4	1.99		2 6	+0.7	1 0.2 36	77.746	357.3	2.15		2 7	-0.1	3 3.0 26
78.782	301.4	1.96		3n	0.2	36-Inch	77.368	357.4	2.20		3n	3.3	26-Inch
13649	BU 984			20 17.6 +26 23			13701	J 837			20 19.8 +12 03		
79.800	247.1	0.60		2 5	0.0	4 0.5 26	76.703	295.4	1.90		2 6	0.0	3 0.7 26
79.808	250.2	0.52		2 5	0.0	3 0.4 26	76.728	298.5	2.00		2 7	+0.1	3 0.6 26
79.827	248.9	0.57		2 5	0.0	3 0.6 26	77.760	296.2	2.19		2 5	0.0	3 0.8 26
79.833	247.2	0.56		2 8	0.0	3 0.3 26	77.064	296.7	2.03		3n	0.7	26-Inch
84.713	251.2	0.54		2 6	+0.2	3 0.3 26							
84.719	254.8	0.48		2 5	+0.1	3 0.4 26							
84.724	250.2	0.52		2 5	-0.2	3 0.2 26							
79.817	248.4	0.56		4n	0.4	26-Inch	13723	STT 406			20 19.9 +45 22		
84.719	252.1	0.51		3n	0.3	26-Inch	76.788	110.5	0.58		2 5	-0.2	3 0.8 26
							77.574	120.8	0.61		2 4	-0.1	4 0.7 26
							77.631	119.4	0.47		2 5	0.0	3 0.5 26
							77.746	120.4	0.55		2 6	0.0	3 0.7 26
							86.463	115.8	0.56		2 4	+0.1	3 0.6 26
							86.660	116.1	0.55		2 5	-0.1	3 0.5 26
							86.690	115.8	0.53		2 5	0.0	3 0.6 26
							86.709	116.1	0.49		2 6	-0.1	3 0.5 26
							77.435	120.0	0.55		4n	0.7	26-Inch
							86.630	116.0	0.53		4n	0.6	26-Inch

Heintz, 1978: +1.2, +0.21.

Heintz, 1976: +2.1, -0.03; +1.3, -0.04.

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

173

13728	A 1427	20 20.2 +39 24	13772	ES 2190	20 22.7 +36 51
79.846	107.4 0.30	1 7 0.0 3 1.2 26	79.800	188.0 1.46	2 5 0.0 4 0.1 26
79.852	109.4 0.30	3 6 +0.1 3 1.4 26	81.735	188.8 1.48	2 5 0.0 4 0.2 26
79.871	102.7 0.38	2 5 +0.2 3 1.4 26	81.807	189.3 1.57	2 6 0.0 4 0.2 26
79.876	106.5 0.34	3 6 +0.2 3 1.6 26	81.114	188.7 1.50	3n 0.0 26-Inch
79.861	106.5 0.33	4n 1.4 26-Inch			
Docobo, Costa, 1987: +0.6, 0.00. Starikova, 1983: -4.1, +0.07. Muller, 1954: +5.6, +0.05.			13781	WHC 19	20 23.4 +05 35
13725	HU 360	20 20.5 +16 34	82.825	358.5 2.05	1 5 0.0 3 0.0 26
77.763	152.6 0.20	2 6 0.0 3 0.0 26	84.713	355.6 2.06	1 6 +0.1 3 0.2 26
79.718	158.6 0.19	2 6 0.0 3 0.0 26	84.716	356.0 2.24	1 7 0.0 3 0.2 26
79.797	153.0 0.15	2 7 +0.1 4 26	84.085	356.7 2.12	3n 0.1 26-Inch
79.833	158.5 0.18	3 7 0.0 ? 26			
79.278	155.7 0.18	4n 0.0 26-Inch		BU 763	20 23.9 -42 26
	RST 3255	20 20.5 -27 49	78.776	255.7 0.45	2 4 +0.6 1 0.9 36
84.787	263.6 0.14	2 7 +0.6 3 60	78.781	250.9 0.51	2 5 +0.2 1 0.7 36
84.790	256.2 0.15	2 8 +1.0 3 0.0 60	78.784	248.9 0.64	2 7 +0.3 1 0.8 36
84.793	249.4 0.14	2 7 +0.7 3 0.0 60	84.795	253.2 0.47	2 7 +0.7 4 0.8 36
84.790	256.4 0.14	3n 0.0 60-Inch	84.798	257.9 0.49	2 7 +0.3 4 0.6 36
			84.801	254.9 0.43	2 7 +0.4 4 0.7 36
Heintz, 1984: -6.1, -0.07.			78.780	251.8 0.53	3n 0.8 36-Inch
			84.798	255.3 0.46	3n 0.7 36-Inch
13738	HLD 158	20 21.3 +02 51	13818	HO 457	20 24.3 +29 22
80.654	64.5 0.52	2 7 0.0 3 0.3 26	86.824	61.5 2.00	2 5 0.0 3 0.0 26
80.657	65.3 0.58	2 6 +0.1 3 0.2 26	86.830	61.1 1.95	2 7 0.0 3 0.0 26
80.676	65.3 0.63	2 7 0.0 4 0.3 26	86.849	60.6 1.97	2 8 0.0 3 0.0 26
80.662	65.0 0.58	3n 0.3 26-Inch	86.834	61.1 1.97	3n 0.0 26-Inch
Baize, 1976: +1.1, -0.01.					
13750	STF 2672	20 21.6 +23 46	13804	HU 1198	20 24.4 +13 00
84.724	333.7 0.76	2 5 -0.1 3 0.2 26	80.659	27.5 0.59	2 8 0.0 3 0.6 26
85.559	332.4 0.68	2 7 -0.1 3 0.3 26	80.720	30.1 0.64	2 5 +0.1 3 0.8 26
85.589	332.4 0.61	2 6 0.0 3 0.3 26	80.766	25.8 0.52	2 6 -0.2 3 0.7 26
85.291	332.8 0.68	3n 0.3 26-Inch	80.715	27.8 0.58	3n 0.7 26-Inch
	JSP 812	20 22.0 -32 24			
84.790	264.2 0.18	2 8 +1.1 3 0.6 60	13809	WOR 33 AP	20 24.4 +12 12
84.793	267.7 0.20	2 6 +0.8 3 0.8 60	77.763	140.9 0.37	3 5 0.0 3 0.6 26
84.792	266.0 0.19	2n 0.7 60-Inch	78.529	145.4 0.31	2 6 0.0 3 0.6 26
	OL 25	20 22.3 -36 31	78.551	142.0 0.35	2 7 0.0 3 0.5 26
78.770	263.7 1.70	2 5 +0.4 1 0.8 36	78.642	143.9 0.34	1 5 -0.1 3 0.6 26
78.773	261.1 1.66	2 6 +0.4 1 0.5 36	86.788	133.1 0.40	2 5 -0.2 3 0.7 26
78.776	264.7 1.60	2 5 +0.4 1 0.6 36	86.802	138.6 0.44	2 6 0.0 3 0.8 26
78.773	263.2 1.65	3n 0.6 36-Inch	86.808	141.8 0.44	2 7 -0.1 3 0.8 26
			86.830	141.8 0.55	2 7 0.0 3 0.8 26
			78.371	143.0 0.34	4n 0.6 26-Inch
			86.807	138.8 0.46	4n 0.8 26-Inch

Perhaps some increase in separation.

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

13830	BU 432	20 24.8 +35 46		I 1420	20 26.8 -43 33
80.772	198.4	1.47	2 4 0.0 3 1.4 26	78.806	169.3 0.20 2 7 +0.6 1 0.1 60
80.807	199.2	1.52	2 4 -0.3 3 1.0 26	78.808	168.3 0.20 2 7 +0.7 1 0.2 60
80.810	200.5	1.47	2 5 -0.1 3 1.0 26		
80.851	198.9	1.48	2 5 +0.1 3 0.8 26	78.807	168.8 0.20 2n 0.2 60-Inch
80.810	199.2	1.48	4n 1.0 26-Inch	Half the orbit has been described.	
13847	D 22	20 25.5 +40 06		R 321	20 26.9 -37 24
80.810	159.4	2.84	2 4 0.0 3 1.3 26	78.773	153.8 1.08 2 7 +0.5 2 1.4 36
80.832	157.3	2.83	2 4 0.0 3 1.3 26	78.781	148.7 1.23 2 5 +0.4 1 1.2 36
80.851	159.1	2.84	2 5 +0.1 3 1.2 26	78.784	149.4 1.29 2 7 +0.7 1 1.5 36
80.831	158.6	2.84	3n 1.3 26-Inch	84.773	142.8 1.32 2 7 +0.4 3 1.4 60
				84.776	144.5 1.22 2 5 +0.5 3 1.4 60
				84.784	142.7 1.22 2 5 +0.7 3 1.2 60
13846	A 47	20 25.5 +35 54		78.779	150.6 1.20 3n 1.4 36-Inch
80.810	178.9	1.67	2 4 0.0 3 0.6 26	84.778	143.3 1.25 3n 1.3 60-Inch
80.832	178.5	1.55	2 4 -0.1 3 0.8 26	Dommanget, 1979: -0.9, 0.00; -4.0, -0.09.	
81.653	179.1	1.60	2 7 0.0 3 0.4 26		
81.653	178.8	1.61	3n 0.6 26-Inch	13866	J 559 20 27.1 +09 48
13840	A 392	20 25.6 +25 04		87.788	273.7 1.72 2 5 0.0 3 0.2 26
79.808	297.0	0.89	2 5 0.0 3 1.6 26	87.804	271.0 1.73 2 5 0.0 3 26
79.827	296.6	1.00	2 5 0.0 3 1.2 26	87.807	270.5 1.90 2 7 0.0 3 0.2 26
79.833	301.9	0.97	2 6 0.0 4 1.6 26		
79.823	298.5	0.95	3n 1.5 26-Inch	87.800	271.7 1.78 3n 0.2 26-Inch
	STF 2682	20 25.7 +25 21		13872	A 1674 AXBC 20 27.6 +14 54
87.823	297.4	21.55	2 4 0.0 3 0.8 26	74.729	291.8 8.30 2 4 0.0 3 2.0 26
87.865	297.5	21.48	2 5 +0.2 3 1.0 26	81.826	291.6 8.62 2 6 +0.1 4 1.0 26
87.844	297.4	21.52	2n 0.9 26-Inch	78.278	291.7 8.46 2n 1.5 26-Inch
13841	A 728	20 26.0 -00 40			BC
81.842	344.8	0.34	2 7 0.0 4 0.4 26	75.846	11.7 0.73 1 7 +0.4 3 1.3 26
86.767	343.6	0.31	1 7 -0.2 3 26	76.703	8.3 0.83 1 6 0.0 3 3.0 26
86.788	342.8	0.34	1 5 -0.1 3 26	78.644	13.9 0.64 1 6 +0.1 3 2.5 26
86.802	340.0	0.38	1 5 0.0 3 26	77.064	11.3 0.73 3n 2.3 26-Inch
85.550	342.8	0.34	4n 26-Inch		OL 26 20 27.9 -31 15
	RST 4665	20 26.2 -11 15		78.770	332.1 2.00 2 5 +0.4 1 1.8 36
78.792	349.1	0.55	2 4 +0.6 1 0.0 60	78.776	330.9 1.73 2 4 +0.6 1 1.5 36
78.803	348.6	0.51	1 5 +0.8 1 0.0 60	78.781	329.0 2.01 2 5 +0.5 1 1.4 36
78.808	349.0	0.46	2 6 +1.0 1 60	78.776	330.7 1.91 3n 1.6 36-Inch
78.801	348.9	0.51	3n 0.0 60-Inch	13908	A 733 20 28.4 +60 15
Considerable angular decrease.				81.637	175.5 1.25 2 4 0.0 3 1.2 26
				81.787	171.7 1.10 2 8 0.0 4 1.2 26
				81.807	168.8 1.08 2 6 0.0 4 1.0 26
				81.842	172.6 1.05 2 7 -0.4 3 0.8 26
				81.768	172.2 1.12 4n 1.0 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

175

13894	A 610	20 29.1 +07 10
78.721	332.9	0.27 1 6 0.0 3 0.3 26
78.836	340.4	0.20 2 6 -0.2 3 0.2 26
79.718	334.6	0.27 3 7 0.0 3 0.2 26
79.797	339.9	0.35 1 7 0.0 4 0.4 26
85.589	3.5	0.26 1 6 0.0 3 0.3 26
85.644	1.5	0.33 1 6 -0.1 3 0.3 26
86.690	11.5	0.41 1 5 -0.1 3 26
86.712	9.8	0.26 1 5 -0.1 3 26

79.268	337.0	0.27 4n 0.3 26-Inch
86.159	6.6	0.32 4n 0.3 26-Inch

Heintz, 1979: +0.4, -0.05; +3.1, 0.00.

I 1421	20 29.1 -48 26
78.773	353.4 0.32 2 6 +0.6 2 0.2 36
78.781	350.2 0.36 2 5 +0.5 1 0.0 36
78.784	351.2 0.36 2 8 +0.6 1 0.2 36
78.779	351.6 0.35 3n 0.1 36-Inch

Angular decrease.

KUI 97	20 29.5 +56 04
81.787	138.4 0.78 2 7 +0.1 4 2.8 26
81.807	137.0 0.89 2 6 +0.1 4 2.5 26
81.826	136.8 0.83 3 6 -0.2 4 1.8 26
81.842	137.9 0.82 2 7 -0.5 3 2.0 26

81.816	137.5	0.83 4n 2.3 26-Inch
--------	-------	---------------------

The angle and separation continue to increase slowly.

WOR 9	20 30.2 +26 51
77.760	323.2 1.05 2 5 0.0 3 0.2 26
77.763	323.1 1.07 2 6 0.0 3 0.2 26
78.529	321.8 1.03 2 6 0.0 3 0.3 26
78.551	322.4 1.04 2 8 0.0 3 0.1 26
84.648	315.2 0.95 2 6 -0.1 3 0.4 26
84.713	313.0 0.88 2 6 +0.2 3 0.2 26
84.716	314.8 1.10 2 6 -0.1 3 0.3 26
84.724	310.2 0.86 2 5 -0.1 3 0.2 26

78.151	322.6	1.05 4n 0.2 26-Inch
84.700	313.2	0.95 4n 0.3 26-Inch

The slow decrease in angle and separation continues.

13921	BU 987	20 30.2 +19 25
86.824	126.9	2.60 2 5 0.0 3 4.0 26
86.830	125.4	2.51 2 7 0.0 3 2.5 26
86.827	126.2	2.56 2n 3.3 26-Inch

B 485	20 30.3 -57 41
84.773	82.4 0.35 2 5 +0.5 3 0.9 60
84.776	82.8 0.31 2 5 +0.6 3 0.4 60
84.782	82.5 0.31 2 6 +0.6 3 1.0 60
84.777	82.6 0.32 3n 0.8 60-Inch

No measures since 1937. Angular increase.

13940	AG 257	20 31.2 +05 12
81.842	248.3	1.76 2 7 -0.1 4 0.2 26
81.864	248.2	1.76 2 7 +0.1 3 0.2 26
81.867	248.4	1.75 2 7 +0.3 3 0.1 26
81.858	248.3	1.76 3n 0.2 26-Inch

13951	A 395	20 31.6 +05 29
81.842	170.3	0.76 1 7 0.0 4 1.4 26
81.864	165.8	0.63 1 6 +0.2 3 1.7 26
81.867	167.4	0.59 3 7 +0.4 3 1.5 26
81.858	167.8	0.66 3n 1.5 26-Inch

GLI 259	20 31.9 -40 54
78.770	157.7 4.02 2 5 +0.4 1 0.1 36
78.773	157.6 4.02 2 7 +0.7 2 0.1 36
78.776	158.5 4.07 2 4 +0.7 1 0.2 36
78.773	157.9 4.04 3n 0.1 36-Inch

HJ 1528	20 32.1 +12 20
84.724	237.7 9.98 2 5 0.0 3 0.8 26
86.712	238.5 10.21 2 5 -0.1 3 0.5 26
86.767	240.1 10.03 2 7 -0.2 3 0.5 26
86.068	238.8 10.07 3n 0.6 26-Inch

RST 5470	20 32.1 -45 21
78.806	335.8 0.10 2 7 +0.3 1 0.0 60
78.808	332.6 0.13 2 7 +0.5 1 0.2 60
84.787	329.6 0.14 2 6 +0.6 3 0.2 60
84.790	326.6 0.14 2 8 +1.1 3 0.6 60
84.793	322.3 0.17 2 7 +0.7 3 0.5 60
78.807	334.2 0.12 2n 0.1 60-Inch
84.790	326.2 0.15 3n 0.4 60-Inch

No measures since discovery in 1945. At this small separation, the quadrant is uncertain, but rapid motion is evident.

13968	A 2281	20 32.4 +04 26
81.842	62.1	1.69 4 7 +0.1 4 2.7 26
81.864	65.3	1.79 2 6 +0.3 3 2.8 26
81.867	65.9	1.79 2 7 +0.4 3 3.0 26
81.858	64.4	1.76 3n 2.8 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

13961 SEE 20 32.6 -16 37
78.792 130.6 0.23 2 5 +0.7 1 0.2 60
78.803 132.8 0.21 1 5 +0.8 1 0.2 60
78.808 128.6 0.22 1 6 +1.0 1 0.4 60
78.801 130.7 0.22 3n 0.3 60-Inch
Heintz, 1978: +5.4, -0.05.

13986 BU 670 20 32.9 +13 56
78.839 15.8 0.73 1 6 -0.1 3 0.3 26
79.718 15.5 0.77 2 6 0.0 3 0.4 26
79.797 13.4 0.83 1 7 0.0 4 0.3 26
85.559 13.2 0.76 1 6 -0.1 3 0.4 26
85.589 14.5 0.69 1 6 0.0 3 0.5 26
85.644 12.6 0.71 1 6 0.0 3 0.5 26
79.451 14.9 0.78 3n 0.3 26-Inch
85.597 13.4 0.72 3n 0.5 26-Inch

13987 L 35 20 32.9 +13 56
78.529 269.4 0.28 2 6 +0.1 3 0.3 26
78.551 270.4 0.35 2 7 +0.1 3 0.3 26
78.642 275.6 0.29 2 5 0.0 3 0.2 26
80.654 260.8 0.33 2 6 -0.1 3 0.3 26
80.657 263.2 0.35 2 7 0.0 3 0.2 26
80.676 262.8 0.35 2 7 0.0 4 0.3 26
85.559 247.2 0.28 4 6 0.0 3 0.5 26
85.589 254.9 0.34 2 5 +0.1 3 26
85.644 249.0 0.31 2 6 0.0 3 26
86.788 249.4 0.40 2 6 0.0 3 0.2 26
86.802 238.6 0.40 2 6 +0.1 3 26
86.830 241.8 0.41 2 7 0.0 3 0.0 26
86.849 238.3 0.38 2 7 0.0 3 26
78.574 271.8 0.31 3n 0.3 26-Inch
80.662 262.3 0.34 3n 0.3 26-Inch
85.597 250.4 0.31 3n 0.5 26-Inch
86.817 242.0 0.40 4n 0.1 26-Inch

Starikova, 1983: +1.6, -0.05; +0.3, -0.03;
+6.9, 0.07; +2.9, +0.02.

13983 J 1 20 32.9 +11 42
79.808 51.4 1.98 2 5 +0.1 3 0.2 26
79.827 50.2 1.97 2 5 0.0 3 0.3 26
79.833 52.6 1.96 2 7 0.0 3 0.2 26
79.823 51.4 1.97 3n 0.2 26-Inch

RST 1073 20 33.2 -57 18
84.773 101.4 0.45 2 6 +0.5 3 0.4 60
84.782 101.1 0.41 2 6 +0.4 3 0.4 60
84.784 98.2 0.34 2 5 +0.7 3 60
84.780 100.2 0.40 3n 0.4 60-Inch

13997 STF 2696 20 33.6 +05 26
86.778 298.3 0.48 2 6 -0.1 3 0.3 26
86.802 298.2 0.50 2 6 0.0 3 0.4 26
86.805 302.2 0.55 2 4 -0.1 3 0.3 26
86.808 298.9 0.65 2 6 -0.2 3 0.3 26
86.798 299.4 0.54 4n 0.3 26-Inch

14007 A 1431 20 33.7 +38 35
80.720 30.4 0.91 2 5 0.0 3 0.8 26
80.769 29.6 0.95 2 6 -0.2 3 0.6 26
80.772 26.0 0.87 2 3 0.0 3 0.6 26
80.807 30.2 0.87 2 3 -0.1 3 0.8 26
80.767 29.0 0.90 4n 0.7 26-Inch

i 1423 20 34.2 -48 17
84.795 48.2 1.43 2 7 +0.7 4 0.4 36
84.798 49.8 1.43 2 8 +0.3 4 0.2 36
84.801 49.4 1.35 2 7 +0.4 4 0.5 36
84.798 49.1 1.40 3n 0.4 36-Inch

HU 1615 20 34.8 -63 19
84.795 47.9 0.15 2 7 +0.8 4 0.2 36
84.798 48.6 0.15 2 8 +0.4 4 36
84.801 47.0 0.19 2 7 +0.4 4 0.3 36
84.798 47.8 0.16 3n 0.2 36-Inch

Closed in and beginning to move rapidly.

LDS 714 20 35.3 -50 13
84.787 268.8 0.92 1 7 +0.7 3 1.8 60
84.790 273.2 1.06 2 8 +1.2 3 2.5 60
84.793 276.1 1.35 2 7 +0.9 3 3.0 60
84.790 272.7 1.11 3n 2.4 60-Inch

This is the only measure.

14052 AG 258 20 36.6 +10 27
86.463 8.2 4.07 1 4 0.0 3 0.3 26
86.709 7.3 4.10 1 6 -0.2 3 0.4 26
86.712 9.2 4.12 1 7 0.0 3 0.4 26
86.788 8.2 4.08 1 6 0.0 3 0.6 26
86.668 8.2 4.09 4n 0.4 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

177

14073	BU 151	20 37.5 +14 36	14079	A 742 BC	20 37.8 +29 43
77.631	359.1	0.56 1 5 +0.5 3 0.8 26	80.657	129.3 1.17	2 6 +0.1 3 0.8 26
77.746	0.1	0.60 1 7 -0.1 3 0.6 26	80.659	129.9 1.18	2 8 0.0 3 1.2 26
77.757	357.0	0.64 1 5 0.0 3 0.8 26	80.676	129.9 1.24	2 6 0.0 4 0.6 26
77.760	356.4	0.60 1 5 0.0 3 0.5 26	80.664	129.7 1 20	3n 0.9 26-Inch
78.510	0.7	0.59 1 4 -0.2 3 0.5 26		HEI 77	20 39.3 +15 29
78.512	2.0	0.64 1 5 -0.2 3 0.5 26	86.767	43.1 1.35	2 8 -0.1 3 0.0 26
78.529	0.8	0.50 1 6 +0.1 3 0.5 26	86.788	41.5 1.49	2 6 +0.2 3 0.0 26
78.642	1.8	0.51 1 5 0.0 3 0.6 26	86.802	42.9 1.24	2 6 +0.1 3 26
79.718	3.1	0.60 1 6 0.0 3 0.8 26	86.786	42.5 1.36	3n 0.0 26-Inch
79.797	7.9	0.51 1 7 0.0 4 0.8 26	14099	HU 200	20 39.3 -14 57
79.800	6.7	0.57 1 5 0.0 4 0.8 26	78.781	112.0 0.33	2 7 +0.7 1 0.2 36
79.808	6.6	0.58 1 5 0.0 3 0.8 26	78.784	113.7 0.34	2 7 +0.2 1 0.2 36
80.654	6.9	0.56 2 6 -0.1 3 0.7 26	78.789	111.5 0.36	2 8 +0.5 1 0.4 36
80.657	8.6	0.61 1 6 0.0 3 0.8 26	84.790	112.4 0.28	2 7 +0.9 3 0.4 60
80.659	10.5	0.55 2 8 -0.1 3 0.7 26	84.793	110.0 0.31	2 8 +0.8 3 0.4 60
80.676	9.3	0.58 1 7 -0.1 4 0.7 26	78.785	112.4 0.34	3n 0.3 36-Inch
81.637	12.0	0.57 1 4 0.0 3 0.5 26	84.792	111.2 0.30	2n 0.4 60-Inch
81.650	14.6	0.50 1 5 0.0 5 1.1 26		Heintz, 1979: -0.4, +0.04; -4.1, +0.01.	
81.653	11.5	0.50 1 7 -0.1 3 0.8 26	14126	STT 410	20 39.6 +40 35
81.692	13.0	0.54 2 5 0.0 3 0.6 26	86.805	7.1 0.97	2 4 0.0 3 0.3 26
82.825	19.5	0.36 1 5 0.0 3 0.6 26	86.808	6.9 0.79	2 6 -0.1 3 0.3 26
82.833	24.8	0.39 2 5 -0.5 4 0.8 26	86.824	10.0 0.81	2 6 0.0 3 0.3 26
83.854	27.4	0.27 2 7 -0.1 3 0.8 26	86.830	4.7 0.81	2 7 +0.1 3 0.2 26
83.857	29.2	0.29 2 7 0.0 3 0.8 26	86.817	7.2 0.84	4n 0.3 26-Inch
83.893	29.8	0.25 3 7 +0.8 3 0.8 26	14128	A 1432	20 39.6 +36 58
84.648	38.6	0.31 2 5 0.0 3 1.0 26	77.760	120.5 0.43	2 4 0.0 3 0.0 26
84.713	32.9	0.22 2 6 +0.2 3 1.0 26	77.763	122.0 0.36	2 5 0.0 3 0.1 26
84.716	33.8	0.21 2 5 +0.1 3 0.8 26	78.642	119.9 0.40	2 4 +0.1 3 0.1 26
84.724	38.4	0.25 2 6 0.0 3 0.8 26	78.055	120.8 0.40	3n 0.0 26-Inch
85.559	60.7	0.24 2 7 -0.1 3 1.0 26		KUI 99	20 39.6 +04 58
85.589	62.3	0.25 2 6 0.0 3 1.0 26	76.703	322.7 0.38	1 7 +0.1 3 2.0 26
85.644	63.4	0.22 2 6 0.0 3 1.0 26	76.728	320.0 0.39	1 6 +0.1 3 1.2 26
86.690	99.5	0.23 2 5 -0.1 3 1.0 26	77.746	317.3 0.33	1 6 0.0 3 1.2 26
86.709	104.8	0.23 2 5 -0.1 3 1.0 26	77.763	313.0 0.28	3 6 0.0 3 1.2 26
86.712	105.5	0.20 2 6 0.0 3 1.0 26	78.529	326.8 0.22	2 6 +0.2 3 1.5 26
86.767	106.1	0.20 2 8 -0.2 3 1.0 26	78.551	327.6 0.20	3 8 +0.2 3 2.0 26
86.788	107.8	0.20 2 6 0.0 3 26	78.644	326.8 0.26	1 7 0.0 3 2.0 26
86.849	104.0	0.17 2 7 -0.1 3 1.0 26	78.721	331.7 0.19	3 5 0.0 3 26
87.635	135.2	0.20 2 5 -0.1 3 1.0 26	81.787	93.5 0.22	2 7 0.0 4 1.0 26
87.760	133.0	0.18 2 5 -0.2 3 1.0 26	81.807	96.7 0.20	2 6 +0.1 4 1.0 26
87.788	131.1	0.24 2 5 0.0 3 0.8 26	81.826	98.9 0.23	2 6 +0.1 4 0.8 26
87.807	133.1	0.25 2 6 +0.1 3 1.0 26	81.842	99.1 0.26	2 7 -0.3 4 1.2 26
87.840	128.4	0.23 2 6 -0.3 3 0.8 26			
87.865	133.4	0.24 2 5 -0.2 3 0.8 26			
77.724	358.2	0.60 4n 0.7 26-Inch			
78.548	1.3	0.56 4n 0.5 26-Inch			
79.781	6.1	0.56 4n 0.8 26-Inch			
80.662	8.8	0.58 4n 0.7 26-Inch			
81.658	12.8	0.53 4n 0.8 26-Inch			
82.829	22.2	0.38 2n 0.7 26-Inch			
83.868	28.8	0.27 3n 0.8 26-Inch			
84.700	35.9	0.25 4n 0.9 26-Inch			
85.597	62.1	0.24 3n 1.0 26-Inch			
86.752	104.6	0.20 6n 1.0 26-Inch			
87.782	132.4	0.22 6n 0.9 26-Inch			
Couteau, 1962: +0.2, -0.03; +0.6, -0.06; +1.1, -0.03; +0.4, +0.03; -0.2, +0.03; +2.1, -0.04; -0.7, -0.07; -5.5, -0.02; -1.4, +0.04; 0.0, +0.03. -9.9, 0.00.					
Slightly better than Finsen's orbit.					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

83.854	110.2	0.49	2 6	0.0	3 1.2	26			COU 226	20 41.8 +19 31
83.857	115.8	0.49	2 7	0.0	3 1.0	26				
83.893	114.3	0.42	2 7	+0.9	3 1.0	26	79.833	197.0	0.29	1 7 0.0 4 0.2 26
84.648	120.7	0.63	2 5	0.0	3	26	79.852	202.8	0.27	2 7 0.0 3 0.3 26
84.713	118.6	0.63	2 5	+0.4	3 1.1	26	79.871	206.4	0.30	2 5 +0.2 3 0.3 26
84.716	116.8	0.55	2 5	+0.2	3 1.2	26	79.885	197.7	0.27	2 8 +0.2 3 0.3 26
84.724	119.7	0.49	2 5	+0.1	3 1.0	26	86.808	19.3	0.30	2 6 0.0 3 0.3 26
85.559	125.7	0.60	2 5	0.0	3 1.2	26	86.824	20.7	0.39	2 5 0.0 3 0.3 26
85.589	122.3	0.60	2 5	+0.1	3 1.3	26	86.830	25.4	0.29	2 7 +0.2 3 26
85.644	129.2	0.67	2 4	+0.1	3 1.2	26	86.849	23.1	0.29	2 8 0.0 3 0.3 26
86.712	124.5	0.73	2 5	0.0	3 1.2	26				
86.767	119.9	0.79	2 7	0.0	3 1.2	26	79.860	201.0	0.28	4n 0.3 26-Inch
86.788	123.6	0.82	2 6	+0.1	3 1.2	26	86.828	22.1	0.32	4n 0.3 26-Inch
86.802	121.6	0.86	2 6	+0.1	3 1.0	26				
86.830	120.4	0.83	2 6	-0.1	3 1.1	26				
87.788	128.3	0.83	2 5	0.0	3 1.2	26				
87.807	124.7	0.81	2 7	+0.2	3 1.4	26				
87.840	122.6	0.93	2 5	-0.2	3 1.4	26				
87.865	126.2	0.70	2 5	+0.1	3 1.2	26				
									LDS 720 8C	20 41.8 -32 26
77.235	318.2	0.34	4n	1.5	26-Inch		78.773	171.7	4.85	2 5 +0.3 1 1.4 36
78.611	328.2	0.22	4n	1.8	26-Inch		78.773	171.7	5.16	2 7 +0.6 2 2.0 36
81.816	97.0	0.23	4n	1.0	26-Inch		78.776	170.4	5.04	2 4 +0.6 1 1.6 36
83.868	113.4	0.47	3n	1.1	26-Inch					
84.700	119.0	0.58	4n	1.1	26-Inch		78.773	171.3	5.02	3n 1.7 36-Inch
85.597	125.7	0.62	3n	1.2	26-Inch					
86.780	122.0	0.81	5n	1.1	26-Inch					
87.825	125.4	0.82	4n	1.3	26-Inch					
Heintz, 1984:	+1.2, -0.06; +4.0, -0.03;									
	-5.3, +0.06; -4.8, +0.07;						14196	BU 152		20 42.3 +57 24
	-1.4, +0.10; +3.6, +0.05;									
	-1.7, +0.14; +0.7, +0.07.						79.846	88.3	1.24	2 6 -0.2 3 0.8 26
Separations confirmed by speckle. The or-							79.852	90.5	1.13	2 6 0.0 3 0.8 26
bit represents the angles tolerably well,							79.871	92.0	1.24	2 4 0.0 3 0.8 26
but there is still a problem with the sep-							79.885	91.4	1.12	2 8 +0.1 3 0.8 26
arations.										
							79.864	90.6	1.18	4n 0.8 26-Inch
	HU 1617					20 40.3 -51 14				
78.806	141.6	0.09	2 7	+0.5	1	60				
78.808	141.1	0.09	2 8	+0.6	1	60				
78.807	141.4	0.09	2n			60-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

179

14238	BU 64	20 45.0 +12 44	14260	A 173	20 45.8 +24 16
78.680	342.9	0.54 2 5 0.0 3 0.2 26	80.851	129.0	1.03 2 5 0.0 3 1.5 26
78.721	343.7	0.55 2 4 +0.1 3 0.2 26	81.653	129.8	0.95 2 6 0.0 3 1.6 26
78.737	343.0	0.47 1 5 +0.1 3 0.3 26	81.692	126.8	1.10 2 5 +0.1 3 1.8 26
81.653	342.8	0.65 2 7 0.0 3 0.2 26	81.787	130.5	1.02 2 7 +0.1 4 1.8 26
81.692	345.0	0.66 2 5 +0.1 3 0.3 26	81.496	129.0	1.02 4n 1.7 26-Inch
81.735	341.3	0.53 2 4 -0.3 4 0.2 26	14262	B 500	20 46.5 -21 41
81.785	342.3	0.62 4 3 +0.2 3 0.3 26	78.770	120.7	1.13 2 5 +0.2 1 0.4 36
86.463	340.1	0.57 2 3 0.0 3 26	78.773	119.3	1.27 2 6 +0.2 2 0.8 36
86.690	346.0	0.78 2 5 -0.2 3 26	78.789	118.5	1.35 2 7 +1.0 1 0.6 36
86.709	347.9	0.66 1 5 -0.1 3 26	78.777	119.5	1.25 3n 0.6 36-Inch
86.712	348.2	0.68 1 5 0.0 3 26		KUI 101	20 46.7 +46 31
78.713	343.2	0.52 3n 0.2 26-Inch	80.654	109.2	0.31 3 6 +0.1 3 2.2 26
81.716	342.8	0.62 4n 0.2 26-Inch	80.654	109.2	0.31 1n 2.2 26-Inch
86.644	345.6	0.67 4n 26-Inch	14286	BU 364	20 47.0 +25 25
Baize, 1957: +0.5, -0.03; -1.4, +0.07; -1.1, +0.12.			86.808	242.1	1.00 2 7 0.0 3 0.2 26
14233	STF 2723	20 45.0 +12 19	86.824	241.8	0.84 2 5 0.0 3 0.0 26
80.769	121.6	1.22 2 5 -0.3 3 26	86.830	243.2	0.92 2 7 +0.1 3 0.3 26
80.810	124.4	1.16 2 3 -0.1 3 1.0 26	86.849	241.7	1.00 2 8 0.0 3 0.0 26
80.832	121.1	1.15 2 3 -0.1 3 1.3 26	86.828	242.2	0.94 4n 0.1 26-Inch
80.851	122.8	1.23 2 5 0.0 3 1.5 26	14296	STT 413 APXB	20 47.4 +36 29
80.816	122.5	1.19 4n 1.3 26-Inch	79.808	16.8	0.86 2 5 0.0 3 1.3 26
	I 17	20 45.0 -50 29	79.827	15.6	0.81 2 5 -0.2 3 1.5 26
84.776	37.2	0.89 2 5 +0.6 3 0.0 60	79.833	14.8	0.83 2 6 -0.1 4 1.3 26
84.782	34.5	0.88 2 7 +0.6 3 0.2 60	79.846	13.5	0.86 2 7 0.0 3 1.3 26
84.784	35.6	0.92 2 5 +0.6 3 60	79.828	15.2	0.84 4n 1.5 26-Inch
84.781	35.8	0.90 3n 0.1 60-Inch	Rabe, 1948: -0.4, 0.01. Baize, 1983: -1.7, -0.05. The later orbit is no improvement. The primary has been resolved into a close pair by McAlister and colleagues.		
14224	I 666	20 45.1 -23 45	14280	BU 153	20 47.4 -26 25
78.792	242.2	0.13 2 5 +0.6 1 60	78.770	257.6	1.83 2 5 +0.3 1 1.2 26
78.800	256.5	0.14 2 4 +0.5 1 60	78.776	259.2	1.64 2 5 +0.8 1 1.8 26
78.806	249.0	0.10 2 7 +0.7 1 60	78.789	257.3	1.81 2 9 +1.0 1 1.0 26
78.799	249.2	0.12 3n 60-Inch	78.778	258.0	1.76 3n 1.3 36-Inch
14253	A 1210	20 45.7 +08 38	14312	BU 66	20 48.1 +27 27
87.788	248.7	4.13 2 5 0.0 3 2.5 26	87.804	165.6	1.11 1 4 0.0 3 0.7 26
87.804	247.7	4.10 2 4 0.0 3 1.5 26	87.807	166.5	1.09 2 7 +0.1 3 0.4 26
87.823	252.3	4.27 2 4 0.0 3 2.5 26	87.840	166.3	1.08 2 6 0.0 3 0.5 26
87.840	249.1	3.86 2 6 0.0 3 3.5 26	87.865	169.9	1.01 2 4 0.0 3 26
87.814	249.4	4.09 4n 2.5 26-Inch	87.829	167.1	1.07 4n 0.5 26-Inch
14249	BU 834	20 45.7 +07 09			
81.842	134.4	2.32 2 7 0.0 4 2.5 26			
81.864	133.4	2.33 2 6 +0.2 3 2.2 26			
81.867	131.7	2.24 2 7 +0.3 3 2.6 26			
81.858	133.2	2.30 3n 2.4 26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

14297	A 174	20 48.1 -03 02	14370	BU 155	20 51.1 +51 25
78.781	359.7 0.48	1 6 +0.7 1 1.0 36	76.613	34.5 0.78	1 6 0.0 4 0.8 26
78.784	2.7 0.57	1 6 +0.5 1 0.8 36	76.728	37.8 0.84	2 7 0.0 3 0.7 26
78.789	4.8 0.62	1 8 +0.5 1 1.0 36	77.746	36.4 0.76	2 5 0.0 3 0.7 26
			79.727	37.8 0.86	2 6 -0.1 3 0.8 26
78.784	2.4 0.56	3n 0.9 36-Inch	77.704	36.0 0.81	4n 0.8 26-Inch
14300	FIN 8	20 48.6 -28 04			
78.770	192.2 2.43	2 5 +0.4 1 0.8 36	14360	STF 2729	20 51.4 -05 38
78.776	191.8 2.35	2 5 +0.9 1 1.5 36	80.676	11.0 1.02	1 6 0.0 3 1.2 26
78.789	190.3 2.43	2 8 +1.1 1 1.2 36	80.720	10.5 1.09	1 5 0.0 3 1.0 26
			80.769	10.0 1.04	1 6 -0.3 3 1.2 26
78.778	191.4 2.40	3n 1.2 36-Inch	80.851	10.7 0.92	1 5 +0.1 3 1.4 26
14320	HO 142	20 48.8 -02 14	80.754	10.6 1.02	4n 1.2 26-Inch
79.718	8.9 0.96	1 6 -0.1 3 0.2 26	Heintz, 1982: -0.4, +0.02.		
79.808	9.0 1.07	1 5 0.0 3 0.2 26			
79.827	11.6 0.92	1 5 0.0 3 0.2 26	14368	A 613	20 51.9 +05 45
79.833	8.8 1.02	1 7 0.0 4 0.1 26	84.648	340.0 0.77	2 6 0.0 3 0.2 26
			84.853	336.2 0.79	2 6 0.0 3 0.0 26
79.796	9.6 0.99	4n 0.2 26-Inch	84.872	336.9 0.70	2 5 0.0 3 0.0 26
14333	J 194	20 49.4 +11 24	84.791	337.7 0.75	3n 0.1 26-Inch
78.680	207.3 0.75	2 5 0.0 3 0.2 26			
78.737	203.3 0.62	1 5 +0.1 3 0.2 26	14395	HU 762	20 52.0 +61 27
78.836	206.6 0.71	2 6 -0.1 3 0.2 26	77.757	168.3 1.53	1 5 0.0 3 0.7 26
78.839	205.8 0.63	2 7 -0.3 3 0.1 26	77.763	167.1 1.56	1 5 0.0 3 1.2 26
80.676	202.4 0.81	2 7 0.0 4 0.0 26	78.644	168.6 1.71	2 7 0.0 3 0.6 26
80.720	202.9 0.83	1 5 0.0 3 0.2 26	78.054	168.0 1.60	3n 0.8 26-Inch
80.769	207.1 0.81	2 5 -0.3 3 0.0 26			
80.851	203.1 0.65	2 5 0.0 3 0.0 26	14374	A 1212	20 52.1 +10 15
85.589	191.5 0.70	1 6 0.0 3 0.1 26	78.836	19.1 0.47	2 6 0.0 3 0.2 26
85.644	193.2 0.66	1 5 +0.2 3 0.2 26	78.839	14.1 0.54	1 6 +0.2 3 0.3 26
86.690	192.2 0.87	2 5 -0.2 3 0.2 26	79.718	16.2 0.62	1 6 0.0 3 0.6 26
86.767	190.5 0.74	1 7 -0.1 3 0.0 26	79.131	16.5 0.54	3n 0.4 26-Inch
78.773	205.8 0.68	4n 0.1 26-Inch			
80.754	203.9 0.78	4n 0.0 26-Inch	14361	FIN 5	20 52.1 -29 39
86.172	191.8 0.74	4n 0.0 26-Inch	78.770	17.5 2.04	2 4 +0.6 1 3.0 36
Baize, 1985: -1.2, -0.04; -0.3, +0.05; -5.0, -0.02.			78.784	76.1 2.10	2 7 +0.7 1 2.8 36
14355	BU 67	20 50.5 +30 54	78.789	75.1 1.98	2 7 +1.1 1 2.5 36
86.808	311.7 1.51	2 7 0.0 3 2.5 26	78.781	76.2 2.04	3n 2.8 36-Inch
86.824	310.1 1.66	2 5 0.0 3 3.0 26			
86.830	308.6 1.60	2 7 +0.1 3 2.6 26	14372	A 2286 ABXC	20 52.2 +02 06
86.849	306.6 1.46	2 8 0.0 3 2.5 26	81.653	43.2 1.06	2 5 0.0 3 1.0 26
86.828	309.2 1.56	4n 2.6 26-Inch	81.842	40.5 1.02	2 7 -0.1 4 1.2 26
			81.864	43.0 1.01	2 6 +0.2 3 1.0 26
	B 997	20 50.7 -31 16	81.786	42.2 1.03	3n 1.1 26-Inch
78.800	41.4 0.16	3 5 +0.6 1 0.6 60			
78.806	46.6 0.13	1 7 +0.9 1 0.7 60			
78.808	58.1 0.17	2 6 +0.9 1 0.8 60			
84.784	70.0 0.22	2 5 +0.9 3 0.8 60			
84.787	73.3 0.19	2 7 +0.6 3 0.8 60			
84.790	76.1 0.16	1 7 +1.2 3 0.8 60			
78.805	48.7 0.15	3n 0.8 60-Inch			
84.787	74.8 0.19	3n 0.8 60-Inch			
Heintz, 1973: -2.2, -0.11; +5.7, 0.10.					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

181

14379	HO 144	20 52.3 +20 08		14424	BU 367	20 55.1 +28 06	
79.718	345.5	0.30	1 6 0.0 3 0.2 26	79.846	114.6	0.49	2 8 -0.1 3 0.4 26
79.797	347.6	0.34	1 7 0.0 4 0.3 26	79.852	117.0	0.53	2 5 0.0 3 0.4 26
79.800	350.2	0.31	2 4 -0.3 4 0.2 26	79.871	115.2	0.42	2 5 0.0 3 0.4 26
79.808	347.6	0.31	2 5 0.0 3 0.1 26	79.885	115.3	0.46	2 8 +0.2 3 0.4 26
85.589	349.1	0.32	2 5 0.0 3 0.0 26	83.854	116.6	0.43	2 6 -0.1 3 0.4 26
85.644	346.1	0.34	2 5 0.0 3 0.3 26	83.857	116.8	0.56	2 7 -0.1 3 0.3 26
86.690	353.0	0.28	1 6 -0.2 3 26	83.893	116.8	0.51	2 7 +0.7 3 0.4 26
86.709	344.5	0.34	2 5 -0.1 3 0.0 26	86.808	119.0	0.59	2 6 0.0 3 0.3 26
79.781	347.7	0.32	4n 0.2 26-Inch	86.824	124.5	0.53	2 5 +0.1 3 26
86.158	348.2	0.32	4n 0.1 26-Inch	86.830	118.3	0.49	2 7 +0.2 3 0.3 26
				86.849	118.5	0.51	2 8 0.0 3 0.5 26
				79.864	115.5	0.48	4n 0.4 26-Inch
				83.868	116.7	0.50	3n 0.4 26-Inch
				86.828	120.1	0.53	4n 0.4 26-Inch
14392	A 1435	20 52.6 +36 55		Heintz, 1962: -2.8, -0.03; -4.9, -0.02; -4.0, +0.03.			
76.703	355.1	0.35	2 6 0.0 3 0.3 26	14427	J 1318	20 55.4 +08 36	
76.728	355.4	0.33	2 7 0.0 3 0.2 26	81.653	136.6	0.85	2 6 0.0 3 0.8 26
77.757	354.1	0.37	2 5 -0.1 3 0.2 26	81.807	137.6	0.95	3 5 0.0 4 1.2 26
77.763	357.8	0.32	2 5 0.0 3 0.2 26	81.826	136.0	0.89	2 6 0.0 4 0.8 26
77.238	357.6	0.34	4n 0.2 26-Inch	81.762	136.7	0.90	3n 0.9 26-Inch
	HJ 1585	20 52.7 +15 28		14422	HU 81	20 55.6 -11 47	
86.709	194.2	14.37	1 5 0.0 3 1.0 26	78.773	37.5	0.22	2 6 +0.7 2 0.3 26
86.712	193.4	14.53	4 5 0.0 3 2.0 26	78.781	38.6	0.27	2 6 +0.7 1 0.2 26
86.788	195.2	14.25	3 6 0.0 3 2.0 26	78.784	35.5	0.27	2 6 +0.5 1 0.2 26
86.736	194.3	14.38	3n 1.7 26-Inch	78.779	37.2	0.25	3n 0.2 36-Inch
	B 505	20 53.8 -55 35		14430	STF 2735	20 55.7 +04 32	
84.782	342.7	0.11	2 6 +0.3 3 60	76.689	284.4	2.07	2 4 0.0 3 1.0 26
84.790	342.0	0.09	2 8 +1.0 3 60	77.746	285.7	1.92	2 6 +0.3 3 0.8 26
84.786	342.4	0.10	2n 60-Inch	77.757	284.6	2.05	2 5 +0.1 3 1.0 26
14408	A 877	20 54.6 -00 42		81.653	285.0	2.14	2 6 +0.1 3 1.3 26
81.842	18.9	0.50	2 7 0.0 4 0.6 26	81.692	284.5	1.99	2 4 +0.1 3 1.5 26
81.864	21.9	0.55	2 6 +0.3 3 0.4 26	81.735	284.4	2.13	2 3 0.3 4 1.6 26
81.867	20.5	0.48	2 7 +0.3 3 0.4 26	77.397	284.9	2.01	3n 0.9 26-Inch
81.858	20.4	0.51	3n 0.5 26-Inch	81.693	284.6	2.07	3n 1.5 26-Inch
14421	STI 418	20 54.8 +32 42		14452	A 753	20 56.1 +46 15	
86.805	285.5	1.16	2 4 -0.2 3 0.1 26	78.839	258.3	0.84	2 6 -0.1 3 0.0 26
86.808	285.7	1.11	2 7 0.0 3 0.1 26	79.808	256.6	1.00	2 5 0.0 3 0.3 26
86.824	286.7	1.03	2 6 0.0 3 0.0 26	79.827	257.4	1.02	2 6 -0.1 3 0.3 26
86.830	285.8	1.13	2 7 +0.1 3 0.1 26	79.852	257.5	1.13	2 5 +0.1 3 0.3 26
86.817	285.9	1.11	4n 0.1 26-Inch	79.582	257.4	1.00	4n 0.2 26-Inch
					B 1001	20 56.2 -31 46	
				78.792	136.8	0.11	2 6 +0.7 1 60
				78.806	127.9	0.11	2 7 +0.9 1 60
				78.808	128.6	0.10	2 7 +0.9 1 0.2 60
				78.802	131.1	0.11	3n 0.2 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

	B 1002		20 56.5 -33 40		14492		HU 83		20 59.1 -13 13
78.792	334.8	0.64	2 6 +0.7 1 0.4 60		78.773	42.9	0.25	2 6 +0.8 2	36
78.800	327.4	0.56	2 4 +0.6 1 0.3 60		78.781	34.1	0.20	2 7 +0.7 1 0.2 36	
78.808	332.8	0.58	2 6 +1.0 1 0.4 60		78.784	37.7	0.22	2 7 +0.5 1 0.1 36	
					84.795	43.9	0.18	2 7 +0.5 4 0.0 36	
78.802	331.7	0.59	3n 0.4 60-Inch		84.798	49.2	0.16	2 8 +0.1 4 0.0 36	
					84.801	37.8	0.21	2 7 +0.1 4 0.0 36	
14475	A 400		20 57.5 +40 58		78.779	38.2	0.22	3n 0.0 36-Inch	
76.613	249.0	1.89	2 5 +0.1 4 0.1 26		84.798	43.6	0.18	3n 0.0 36-Inch	
77.757	248.3	1.88	2 5 0.0 3 0.1 26		Heintz, 1965: +0.9, +0.01; -5.6, -0.04.				
77.765	249.5	1.96	2 5 0.0 3 0.1 26						
					14512		HU 764		20 59.4 +36 25
77.378	248.9	1.91	3n 0.1 26-Inch		80.769	201.0	0.35	2 5 -0.1 3 1.2 26	
14481	A 1215		20 58.2 +10 38		80.851	195.8	0.31	2 5 +0.2 3 0.9 26	
81.842	197.0	0.52	1 7 0.0 4 1.2 26		81.653	199.5	0.33	2 7 +0.1 3 1.2 26	
81.867	198.2	0.44	2 7 +0.3 3 1.3 26		81.787	199.0	0.31	2 7 0.0 4 1.4 26	
81.886	198.6	0.55	2 6 -0.2 3 1.6 26						
					81.265	198.8	0.32	4n 1.2 26-Inch	
81.865	197.9	0.50	3n 1.4 26-Inch						
14477	BAR 13		20 58.2 +03 56				I 669		20 59.6 -52 11
78.836	87.0	1.48	2 6 0.0 3 0.8 26		84.776	55.5	0.31	2 6 +0.5 3 0.2 60	
78.839	87.3	1.61	2 5 0.0 3 0.8 26		84.782	55.9	0.35	2 7 +0.6 3 0.3 60	
79.718	85.1	1.75	2 5 +0.1 3 1.0 26		84.784	56.3	0.33	2 5 +0.5 3 0.5 60	
					84.781	55.9	0.33	3n 0.3 60-Inch	
79.131	86.5	1.61	3n 0.9 26-Inch						
14504	STF 2741		20 58.5 +50 27		14524		ES 1166		20 59.7 +46 58
80.659	26.1	1.98	2 8 -0.2 3 0.5 26		79.827	116.0	1.75	2 5 -0.1 3 0.2 26	
80.769	26.6	1.99	2 6 -0.2 3 1.3 26		79.833	114.5	1.60	2 7 -0.1 4 0.3 26	
80.851	29.3	1.88	2 5 -0.1 3 1.3 26		79.846	116.1	1.61	2 7 0.0 3 0.8 26	
81.650	28.2	1.99	2 5 -0.2 3 1.2 26		79.835	115.5	1.65	3n 0.4 26-Inch	
80.982	27.6	1.96	4n 1.1 26-Inch		14540		BU 472		20 59.8 +61 52
					79.871	14.0	0.76	1 4 +0.1 3 0.5 26	
					80.657	12.2	0.76	2 6 -0.1 3 0.2 26	
					80.659	15.7	0.81	2 8 0.0 3 0.0 26	
	B 1003		20 58.8 -62 34		80.396	14.0	0.78	3n 0.2 26-Inch	
84.773	141.5	0.28	2 5 +0.4 3 0.3 60				I 1432		21 00.0 -51 11
84.782	142.2	0.46	2 7 +0.5 3 0.8 60		84.776	272.7	0.32	2 5 +0.6 3	60
84.784	141.8	0.32	2 5 +0.5 3 0.5 60		84.782	268.5	0.28	2 7 +0.7 3 1.0 60	
					84.787	267.9	0.26	2 6 +0.6 3 0.2 60	
84.780	141.8	0.35	3n 0.5 60-Inch		84.782	269.7	0.29	3n 0.6 60-Inch	
14499	STF 2737 AB		20 59.1 +04 18						
79.887	288.4	1.03	2 7 -0.1 3 0.5 26						
79.890	289.0	0.97	2 7 0.0 3 0.3 26						
80.654	287.9	0.94	2 6 0.0 3 0.1 26						
80.657	287.2	0.96	2 6 0.0 3 0.5 26						
84.648	286.4	0.99	2 5 0.0 3 0.2 26						
84.853	286.2	0.94	2 6 0.0 3 0.4 26						
84.872	285.5	1.19	2 5 -0.1 3 0.2 26						
87.788	285.0	0.91	2 5 0.0 3 0.2 26						
87.804	284.6	0.94	2 4 0.0 3 0.4 26						
87.807	288.3	0.94	2 7 0.0 3 0.3 26						
87.840	284.8	0.97	2 6 0.0 3 0.3 26						
					14533		BU 1329		21 00.5 +34 10
80.272	288.1	0.98	4n 0.4 26-Inch		78.529	220.9	0.28	2 5 +0.1 3 0.1 26	
84.791	286.0	1.04	3n 0.3 26-Inch		78.551	224.1	0.32	2 7 0.0 3 0.1 26	
87.810	285.7	0.94	4n 0.3 26-Inch		78.644	230.1	0.31	2 6 0.0 3 0.1 26	
van den Bos, 1933:	+2.3,	-0.08;			78.575	225.0	0.30	3n 0.1 26-Inch	
	+0.4,	0.01; +0.2,	-0.08.						

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

183

14538	A 176	21 00.8 +20 56	14570	BU 69	21 02.6 +21 42
81.787	345.0	0.27 2 7 0.0 4 0.1 26	80.659	341.3	0.60 2 7 +0.1 3 0.8 26
81.807	345.8	0.24 2 5 0.0 4 0.0 26	80.676	340.1	0.59 1 6 0.0 4 0.8 26
81.826	342.3	0.28 2 6 0.0 4 0.1 26	80.720	338.9	0.61 2 5 0.0 3 0.7 26
81.807	344.4	0.26 3n 0.1 26-Inch	80.769	340.7	0.57 1 5 0.0 3 26
			80.706	340.2	0.59 4n 0.8 26-Inch
14543	A 1438	21 01.0 +40 00	14573	STF 2744	21 03.1 +01 32
76.703	61.4	0.27 2 7 0.0 3 0.2 26	80.654	127.2	1.36 2 5 0.0 3 0.5 26
76.728	65.5	0.25 2 8 0.0 3 0.1 26	80.657	127.5	1.34 2 6 0.0 3 0.8 26
77.763	72.2	0.28 2 6 0.0 3 0.2 26	80.659	127.7	1.36 2 8 0.0 3 0.5 26
83.857	68.6	0.24 2 7 -0.1 3 0.0 26	86.712	126.5	1.38 2 5 0.0 3 0.6 26
85.589	72.8	0.28 2 5 0.0 3 0.1 26	86.767	125.3	1.44 2 6 0.0 3 0.6 26
86.767	67.2	0.26 2 7 -0.1 3 0.3 26	86.788	123.7	1.30 2 5 0.0 3 0.6 26
77.065	66.4	0.27 3n 0.2 26-Inch	86.802	124.5	1.47 2 6 -0.1 3 0.5 26
85.404	69.5	0.26 3n 0.1 26-Inch	80.657	127.5	1.35 3n 0.6 26-Inch
			86.767	125.0	1.40 4n 0.6 26-Inch
14558	STF 2746	21 01.8 +39 16	Hopmann, 1960: +1.0, -0.08; +1.4, -0.03.		
83.857	315.4	1.13 2 7 0.0 3 0.6 26	14589	HO 281	21 03.5 +24 00
84.872	315.8	1.02 2 5 0.0 3 0.3 26	86.849	303.5	13.95 2 7 -0.1 3 6.0 26
85.589	317.2	1.23 2 5 +0.1 3 0.6 26	86.892	303.2	13.75 2 7 +0.3 3 6.0 26
84.773	316.1	1.13 3n 0.5 26-Inch	86.870	303.4	13.85 2n 6.0 26-Inch
	COU 128	21 01.9 +23 40	Probably optical.		
84.872	132.5	0.20 2 5 0.0 3 0.0 26	14597	STT 427	21 03.7 +31 04
86.690	135.0	0.14 2 6 0.0 3 26	87.788	146.9	4.04 2 5 0.0 3 4.2 26
86.767	134.5	0.21 2 6 -0.1 3 26	87.807	152.1	4.22 2 6 0.0 3 4.0 26
86.788	136.6	0.19 2 6 0.0 3 26	87.840	151.6	4.15 2 6 +0.1 3 4.0 26
86.279	134.6	0.18 4n 0.0 26-Inch	87.812	150.2	4.14 3n 4.1 26-Inch
14551	HO 148	21 02.0 +03 46	14584	SEE 436	21 03.8 -24 19
78.737	200.5	2.33 1 4 +0.1 3 3.5 26	78.792	303.2	0.13 1 7 +0.7 1 0.3 60
78.836	205.9	2.18 2 5 0.0 3 3.3 26	78.803	303.0	0.14 2 6 +0.5 1 60
78.839	201.0	2.21 1 6 0.0 3 3.4 26	78.798	303.1	0.14 2n 0.3 60-Inch
78.804	202.5	2.24 3n 3.4 26-Inch			
14555	A 1688	21 02.1 +14 27	14588	BU 1211	21 04.0 -18 06
79.718	50.6	0.25 2 5 0.0 3 0.4 26	84.795	340.0	0.80 2 7 +0.6 4 0.8 36
81.886	63.3	0.26 2 5 +0.2 3 0.3 26	84.798	336.4	0.81 2 8 +0.1 4 1.0 36
81.897	49.2	0.27 2 6 +0.2 3 0.6 26	84.801	339.8	0.89 1 8 +0.2 4 0.6 36
81.167	54.4	0.26 3n 0.4 26-Inch	84.798	338.7	0.83 3n 0.8 36-Inch
14553	A 1687	21 02.1 +14 24	14615	STF 2757	21 04.5 +52 24
81.842	189.7	0.68 2 7 0.0 4 0.2 26	79.808	264.8	2.09 2 5 0.0 3 1.4 26
81.867	190.2	0.82 2 7 +0.3 3 0.2 26	79.827	266.5	2.03 2 4 0.0 3 0.9 26
81.886	187.8	0.77 2 5 +0.3 3 0.4 26	79.833	264.7	1.88 2 7 0.0 4 1.4 26
81.865	189.2	0.76 3n 0.3 26-Inch	79.846	262.9	2.01 2 5 0.0 3 1.5 26
			79.828	264.7	2.00 4n 1.3 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

14614	ES 1168	21 04.6 +45 41	14640	HU 364	21 06.9 +23 06
79.827	119.2 1.54	2 5 0.0 3 0.4 26	76.728	89.0 0.24	2 7 +0.1 3 0.2 26
79.833	120.2 1.45	2 7 0.0 4 0.5 26	78.836	88.9 0.17	2 5 +0.1 3 26
79.846	120.4 1.47	2 7 0.0 3 0.7 26	78.839	93.4 0.22	2 6 0.0 3 0.3 26
79.835	119.9 1.49	3n 0.5 26-Inch	78.134	90.4 0.21	3n 0.2 26-Inch
	RST 1081	21 04.6 -56 20	14662	ES 1452	21 07.1 +43 22
84.787	37.2 0.13	2 6 +0.6 3 60	79.852	25.2 2.38	2 5 0.0 3 1.7 26
84.790	32.5 0.12	3 7 +1.1 3 60	80.676	21.0 2.33	2 7 0.0 4 1.0 26
84.793	35.0 0.13	2 7 +0.6 3 0.0 60	80.720	20.7 2.29	2 5 0.0 3 1.2 26
84.790	34.9 0.13	3n 0.0 60-Inch	80.416	22.3 2.33	3n 1.3 26-Inch
14602	SE 3 BC	21 04.7 +03 32		HEI 79	21 07.2 +14 34
79.887	54.3 0.36	2 7 0.0 3 0.5 26	86.808	296.6 1.83	2 7 0.0 3 0.1 26
79.890	59.1 0.31	2 7 +0.1 3 0.2 26	86.849	292.8 1.89	2 7 0.0 3 0.3 26
80.654	61.3 0.33	2 6 +0.1 3 0.2 26	86.892	293.1 1.78	2 7 +0.3 3 0.2 26
80.657	65.2 0.33	2 6 +0.1 3 0.2 26	86.850	294.2 1.83	3n 0.2 26-Inch
80.272	60.0 0.33	4n 0.3 26-Inch			
Baize, 1981: +5.6, -0.08.			14648	BU 368	21 07.5 -08 14
14610	A 1690 BC	21 05.0 +12 43	77.746	277.6 0.25	2 6 +0.1 3 0.3 26
81.842	120.4 0.41	2 7 0.0 4 0.3 26	77.763	279.5 0.29	2 4 +0.1 3 0.2 26
81.867	116.4 0.46	2 7 +0.3 3 0.6 26	78.644	278.4 0.19	2 6 0.0 3 0.3 26
81.886	116.0 0.48	2 5 +0.2 3 0.6 26	78.781	267.7 0.22	2 7 +0.7 1 0.3 36
81.897	122.6 0.50	2 5 +0.3 3 0.5 26	78.784	269.1 0.26	2 8 +0.5 1 0.3 36
81.873	118.8 0.46	4n 0.5 26-Inch	78.789	271.5 0.23	2 8 +0.3 1 0.3 36
			78.051	278.5 0.24	3n 0.3 26-Inch
			78.785	269.4 0.24	3n 0.3 36-Inch
Baize, 1985: +6.5, -0.05; -2.6, -0.04.			14666	STI 527	21 08.0 +05 09
14626	BU 680	21 05.5 +53 40	77.746	149.3 0.18	2 6 +0.2 3 0.5 26
79.808	288.6 0.50	2 4 +0.1 3 0.5 26	78.803	155.7 0.10	1 6 +0.5 1 60
79.827	284.6 0.61	2 3 0.0 3 0.5 26	78.806	153.2 0.15	2 7 +0.5 1 0.5 60
79.833	290.3 0.60	2 7 0.0 4 0.4 26	78.808	155.2 0.15	1 5 +0.9 1 0.5 60
79.846	287.7 0.68	2 7 0.0 3 0.3 26	78.839	145.8 0.17	3 6 +0.1 3 26
79.828	287.8 0.60	4n 0.4 26-Inch	79.797	144.6 0.20	2 7 -0.1 4 0.5 26
	I 1433	21 05.6 -51 50	79.885	147.3 0.19	2 8 0.0 3 0.5 26
84.773	41.5 0.72	2 6 +0.5 3 0.2 60	86.767	128.5 0.23	2 7 0.0 3 26
84.776	45.7 0.53	2 5 +0.6 3 0.3 60	86.802	130.7 0.19	2 6 -0.1 3 26
84.784	41.6 0.67	2 5 +0.7 3 0.1 60	86.808	130.1 0.22	2 6 0.0 3 26
84.778	42.9 0.64	3n 0.2 60-Inch	86.830	134.6 0.22	2 7 +0.1 3 0.4 26
14623	A 178	21 05.9 +21 18	78.806	154.7 0.13	3n 0.5 60-Inch
78.680	67.6 0.96	2 4 +0.1 3 1.2 26	79.067	146.8 0.18	4n 0.5 26-Inch
78.737	66.8 1.06	2 4 +0.1 3 0.8 26	86.802	131.0 0.22	4n 0.4 26-Inch
78.836	69.1 0.95	2 5 0.0 3 1.0 26	Heintz, 1976: +16.0, -0.02; +9.2, +0.04; +33.4, +0.11.		
78.751	67.8 0.99	3n 1.0 26-Inch	Speckle confirms the above measures. The orbit fails.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

185

14679	I 1435	21 09.1 -24 47		14748	HO 152	21 12.5 +28 21	
78.770	49.2	0.39	2 5 +0.3 1 0.3 36	81.842	82.6	0.16	2 7 0.0 4 26
78.773	49.1	0.38	2 5 +0.8 2 0.3 36	83.854	85.4	0.12	2 7 -0.1 3 26
78.781	47.1	0.38	2 7 +1.0 1 0.4 36	83.893	95.0	0.18	2 7 +0.5 3 0.0 26
78.775	48.5	0.38	3n 0.3 36-Inch	83.196	87.7	0.15	3n 0.0 26-Inch
	COU 1333	21 09.3 +31 30		Baize, 1981: -5.3, -0.02.			
85.644	250.5	0.69	2 4 0.0 3 0.3 26		FIN 280	21 12.7 -72 59	
86.690	246.6	0.67	2 7 0.0 3 0.2 26	78.784	57.1	2.51	2 7 +1.0 1 4.0 36
86.709	253.1	0.68	2 5 -0.2 3 0.3 26	78.787	53.7	2.56	2 4 +0.8 4.2 36
86.348	250.1	0.68	3n 0.3 26-Inch	78.789	54.3	2.26	2 8 +1.0 1 2.8 36
14713	A 2287	21 11.1 +01 01		78.787	55.0	2.44	3n 3.7 36-Inch
75.884	243.6	0.10	2 8 +0.3 4 0.1 26	14759	BU 270	21 13.4 +07 13	
75.884	243.6	0.10	1n 26-Inch	79.885	358.8	0.63	1 8 +0.2 3 1.8 26
This is the only measure since 1957. Uncertain.				79.887	357.9	0.70	1 7 0.0 3 2.0 26
14739	DOO 16	21 11.2 +56 21		79.890	0.4	0.50	2 7 +0.1 3 1.8 26
79.852	31.6	1.15	2 5 0.0 3 0.7 26	79.915	359.0	0.59	1 4 +0.2 3 2.0 26
79.871	32.3	1.26	2 4 0.0 3 0.4 26	79.894	359.0	0.60	4n 1.9 26-Inch
79.885	28.3	1.09	2 8 +0.1 3 0.2 26	Heintz, 1979: +4.3, +0.04.			
79.890	30.7	1.07	2 7 +0.1 3 0.4 26	14783	H 48	21 13.7 +64 25	
79.874	30.7	1.14	4n 0.4 26-Inch	81.653	256.0	0.47	2 6 +0.1 3 0.2 26
	HU 1626	21 11.4 -52 21		81.692	255.6	0.50	2 5 -0.1 3 0.2 26
78.776	145.0	1.28	2 4 +0.6 1 0.6 36	81.785	255.6	0.45	2 4 0.0 3 26
78.784	140.2	1.36	2 7 +0.9 1 1.3 36	81.787	256.3	0.49	2 6 -0.1 4 26
78.789	140.9	1.31	2 8 +1.0 1 1.0 36	86.802	261.2	0.35	2 6 0.0 3 26
78.783	142.0	1.32	3n 1.0 36-Inch	86.808	258.9	0.38	2 6 0.0 3 0.0 26
	BRT 2189	21 11.9 +07 10		86.824	260.5	0.35	2 5 0.0 3 26
86.709	284.2	5.49	2 5 0.0 3 1.4 26	86.830	259.3	0.35	2 7 +0.1 3 0.2 26
86.712	285.0	5.96	2 5 0.0 3 1.2 26	81.729	255.9	0.48	4n 0.2 26-Inch
86.788	282.2	5.86	2 6 0.0 3 0.8 26	86.816	260.0	0.36	4n 0.1 26-Inch
86.736	283.8	5.77	3n 1.1 26-Inch	Baize, 1984: +1.6, -0.06; +2.6, -0.05.			
Optical.				14784	STF 2783	21 14.1 +58 18	
14746	ES 1272	21 12.2 +45 49		81.653	7.9	0.82	2 7 +0.2 3 0.2 26
85.589	55.1	3.85	2 5 0.0 3 0.4 26	81.692	11.2	0.79	2 4 0.0 3 26
86.802	55.2	3.80	2 6 0.0 3 0.4 26	81.785	10.6	0.70	2 4 +0.1 3 0.2 26
86.808	53.8	3.73	2 6 0.0 3 0.3 26	81.787	8.7	0.86	2 6 -0.1 4 0.0 26
86.400	54.7	3.79	3n 0.4 26-Inch	86.802	7.5	0.71	1 5 0.0 3 26
				86.808	8.5	0.71	2 6 +0.1 3 0.0 26
				86.824	5.8	0.75	2 6 0.0 3 0.0 26
				86.830	5.9	0.85	2 7 +0.2 3 0.2 26
				81.729	9.5	0.79	4n 0.1 26-Inch
				86.816	6.9	0.76	4n 0.1 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

14773	STT 535	21 14.5 +10 01	14798	A 1692	21 15.2 +55 31
77.757	23.5 0.35	2 4 -0.1 3 0.0 26	81.653	154.2 0.30	2 6 +0.2 3 0.4 26
77.763	27.0 0.30	1 6 -0.1 3 0.3 26	81.787	157.2 0.31	2 6 0.0 4 0.4 26
78.529	21.5 0.36	2 5 0.0 3 0.5 26	81.807	153.6 0.24	2 4 0.0 4 26
78.551	23.8 0.31	2 7 0.0 3 0.1 26	81.826	153.8 0.31	2 6 -0.2 4 0.5 26
78.150	24.0 0.33	4n 0.2 26-Inch	81.768	154.7 0.29	4n 0.4 26-Inch
Tokovinen, 1984: -0.5, 0.00.					
14775	A 883	21 14.6 -00 50	14797	HO 284	21 15.9 +16 00
78.781	73.9 0.14	2 7 +0.7 1 0.0 36	84.872	88.2 3.70	2 5 0.0 3 0.6 26
78.784	71.7 0.15	2 7 +0.5 1 36	86.657	88.2 3.90	2 4 0.0 3 0.4 26
78.789	76.7 0.15	2 7 +0.3 1 0.0 36	86.690	87.6 3.89	2 7 0.0 3 0.3 26
78.785	74.1 0.15	3n 0.0 36-Inch	86.073	88.0 3.83	3n 0.4 26-Inch
Heintz, 1984: -1.7, 0.00.			14808	HU 961	21 16.7 +14 59
	LEO 49	21 14.7 -18 58	87.788	13.7 2.07	2 5 +0.1 3 0.8 26
78.781	281.1 1.25	2 7 +0.8 1 0.5 36	87.807	13.9 1.95	2 6 -0.1 3 0.2 26
78.784	280.9 1.42	2 7 +0.6 1 0.5 36	87.840	14.3 2.05	2 6 +0.1 3 0.5 26
78.782	281.0 1.34	2n 0.5 36-Inch	87.812	14.0 2.02	3n 0.5 26-Inch
14787	AGC 13	21 14.8 +38 02	14824	A 401	21 17.1 +43 12
77.746	156.7 1.04	1 6 +0.1 3 2.6 26	79.830	318.4 0.37	2 5 -0.1 3 0.1 26
78.836	146.4 0.81	1 5 +0.1 3 2.6 26	79.833	321.4 0.42	2 7 -0.1 4 0.0 26
78.839	150.8 0.87	1 5 +0.1 3 2.5 26	79.846	321.6 0.39	2 6 0.0 3 0.1 26
79.718	142.0 0.86	2 5 0.0 3 2.5 26	79.836	320.5 0.39	3n 0.1 26-Inch
79.797	138.0 0.87	2 7 -0.1 4 2.2 26	14822	BU 162	21 17.1 +35 46
79.830	136.2 0.89	3 1 3 2.2 26	76.703	250.7 1.19	2 6 +0.1 3 0.3 26
79.833	142.9 0.85	2 1 0.0 4 2.4 26	76.728	251.4 1.26	2 8 +0.2 3 0.2 26
80.654	140.0 0.90	1 5 0.0 3 2.5 26	77.631	252.0 1.15	2 5 0.0 3 0.2 26
80.657	133.8 0.73	3 6 +0.1 3 2.5 26	77.021	251.4 1.20	3n 0.2 26-Inch
80.659	137.5 0.86	3 8 0.0 3 2.2 26		FIN 281	21 17.6 -71 21
80.676	131.9 0.81	2 6 0.0 4 2.5 26	78.776	269.5 2.94	2 4 +1.4 1 3.2 36
80.720	135.0 0.80	4 5 -0.1 3 2.6 26	78.784	266.1 3.00	2 7 +1.0 1 3.4 36
81.653	125.7 0.61	3 6 0.0 3 2.2 26	78.787	268.9 3.07	4 4 +0.8 1 3.0 36
81.787	126.8 0.75	2 6 +0.1 4 2.5 26	78.782	268.2 3.00	3n 3.2 36-Inch
81.842	126.9 0.76	3 7 0.0 4 2.7 26		COU 1183	21 18.0 +30 49
81.864	131.9 0.54	3 5 0.0 3 2.5 26	86.849	14.6 0.20	2 8 -0.1 3 26
81.897	125.6 0.60	3 8 -0.3 3 2.5 26	86.884	14.0 0.18	2 6 0.0 3 26
83.854	103.8 0.65	2 6 0.0 3 2.2 26	86.892	17.8 0.20	2 7 0.0 3 26
83.857	105.5 0.46	3 7 0.0 3 2.2 26	86.875	15.5 0.19	3n 26-Inch
78.474	151.3 0.91	3n 2.6 26-Inch			
79.794	139.8 0.87	4n 2.3 26-Inch			
80.673	135.6 0.82	5n 2.5 26-Inch			
81.809	127.4 0.65	5n 2.5 26-Inch			
83.856	104.6 0.56	2n 2.2 26-Inch			
Van Biesbroeck, 1940: +0.5, +0.06; -4.0, +0.08; -3.0, +0.07; -3.5, -0.04; -8.1, -0.02.					
Heintz (1970) gives worse residuals.					

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

187

14839	BU 163	21 18.6 +11 34	14926	A 764	21 22.3 +57 34
77.746	254.1	0.45 2 6 +0.1 3 1.8 26	79.808	1.4 1.29	1 4 -0.2 3 2.0 26
78.551	255.4	0.42 2 6 0.0 3 1.8 26	79.846	1.8 0.95	1 6 0.0 3 1.5 26
78.644	259.3	0.38 2 6 0.0 3 1.4 26	79.852	3.2 1.01	3 4 0.0 3 1.7 26
78.836	254.4	0.31 2 5 +0.1 3 1.8 26	79.871	3.7 1.08	2 4 0.0 3 2.0 26
79.718	252.1	0.36 2 5 +0.1 3 1.2 26	86.824	3.6 0.98	2 5 0.0 3 1.3 26
79.797	258.9	0.30 2 7 -0.1 3 1.0 26	86.830	0.8 1.10	4 7 0.0 3 1.5 26
79.830	252.0	0.34 2 5 +0.1 3 1.0 26	86.849	1.6 1.31	2 7 0.0 3 1.5 26
79.833	254.5	0.34 2 6 0.0 4 1.2 26	86.884	9.7 1.12	4 7 +0.1 3 1.8 26
80.659	259.0	0.35 1 8 0.0 3 1.5 26	79.844	2.5 1.08	4n 1.8 26-Inch
80.892	254.1	0.33 2 5 0.0 3 2.0 26	86.847	3.9 1.13	4n 1.5 26-Inch
81.842	247.7	0.25 2 6 0.0 4 1.8 26	Baize, 1981: +0.9, +0.15; -2.8, +0.18.		
81.864	250.6	0.38 2 5 0.0 3 1.8 26			
81.886	250.8	0.34 2 6 -0.2 3 1.6 26			
81.897	247.7	0.28 2 7 -0.2 3 1.8 26			
78.444	255.8	0.39 4n 1.7 26-Inch			
79.794	254.4	0.34 4n 1.1 26-Inch			
81.507	251.6	0.32 6n 1.8 26-Inch	14944	A 765	21 23.8 +47 10
Heintz, 1969: +6.5, -0.04; +6.0, -0.03; +4.9, +0.05.			86.849	28.8 0.47	2 7 0.0 3 0.8 26
			86.884	24.8 0.40	2 7 0.0 3 0.7 26
			86.892	26.6 0.41	2 7 -0.3 3 1.2 26
14873	A 1694	21 19.7 +54 55	86.875	26.7 0.43	3n 0.9 26-Inch
79.830	91.5	0.71 2 5 0.0 3 1.4 26			
79.846	90.0	0.91 2 7 0.0 3 1.5 26			
79.852	97.0	0.82 2 5 0.0 3 1.2 26	14942	A 2288	21 24.3 +03 43
79.885	89.4	0.84 2 8 0.0 3 1.2 26	81.842	265.8 0.39	2 6 0.0 4 0.3 26
79.853	92.0	0.82 4n 1.3 26-Inch	81.864	267.0 0.37	2 5 0.0 3 26
			81.867	269.7 0.36	2 6 +0.1 4 0.2 26
			81.886	266.5 0.35	2 6 0.0 3 0.3 26
14852	BU 252	21 20.1 -27 19	81.865	267.2 0.37	4n 0.3 26-Inch
78.800	269.6	2.32 2 4 +0.6 1 0.1 60	Couteau, 1963: +6.4, +0.03.		
78.803	272.6	2.40 2 6 +0.4 1 0.3 60			
78.808	271.1	2.37 2 7 +0.8 1 0.2 60			
78.804	271.1	2.36 3n 0.2 60-Inch			
14880	BU 838	21 20.9 +03 07		BU 766	21 24.4 -41 00
84.853	138.2	1.54 2 6 0.0 3 1.2 26	78.792	259.6 0.40	2 7 +0.5 1 0.5 60
84.872	137.3	1.57 2 5 0.0 3 0.8 26	78.800	256.1 0.31	2 4 +0.3 1 0.5 60
85.589	139.7	1.62 2 6 0.0 3 1.2 26	78.803	256.4 0.26	2 6 +0.5 1 0.6 60
85.105	138.4	1.58 3n 1.1 26-Inch	78.798	257.4 0.32	3n 0.5 60-Inch
14875	FIN 6	21 21.1 -29 14			
78.777	218.3	1.31 2 5 +0.3 1 0.6 36	14954	BU 164	21 25.1 +09 23
78.784	217.3	1.32 2 7 +0.6 1 0.5 36	78.836	212.0 0.18	2 5 +0.1 3 0.5 26
78.787	214.7	1.18 2 4 +1.0 1 0.7 36	78.839	220.9 0.22	2 5 0.0 3 0.3 26
78.780	216.8	1.27 3n 0.6 36-Inch	78.718	215.3 0.26	2 5 -0.1 3 0.4 26
			79.797	223.2 0.23	2 6 -0.2 4 26
			80.659	219.8 0.23	2 8 0.0 3 0.3 26
			80.676	220.0 0.19	2 5 0.0 4 0.5 26
			80.720	213.2 0.23	2 5 -0.2 3 0.5 26
14893	A 617	21 21.4 +10 20	80.892	212.6 0.22	2 4 0.0 3 26
81.902	99.2	0.18 2 5 0.0 4 26	83.857	213.3 0.15	2 7 0.0 3 0.6 26
81.924	98.4	0.17 2 8 +0.5 4 26	83.893	210.5 0.16	2 6 +0.6 3 26
81.913	98.8	0.17 2n 26-Inch	84.713	214.4 0.15	2 7 0.0 3 26
Tokovinen, 1987: +0.8, 0.00.			79.048	217.8 0.22	4n 0.4 26-Inch
			80.737	216.4 0.22	4n 0.4 26-Inch
			84.154	212.7 0.15	3n 0.6 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

B 1007			21 27.3 -32 18			COU 535			21 29.7 +17 18		
78.792	208.4	0.13	2 7 +0.6 1	0.2	60	86.690	26.4	0.65	2 7 0.0 3		26
78.803	213.4	0.12	2 6 +0.6 1		60	86.767	27.4	0.72	2 7 -0.1 3	0.2	26
78.806	214.7	0.10	2 7 +0.5 1		60	86.884	29.5	0.70	2 7 +0.1 3	0.0	26
84.773	225.4	0.12	2 6 +0.6 3		60						
84.782	221.6	0.12	2 8 +0.5 3		60	86.780	27.8	0.69	3n 0.1		26-Inch
84.787	222.4	0.14	2 7 +0.4 3		60						
78.800	212.2	0.12	3n 0.2		60-Inch						
84.781	223.1	0.13	3n		60-Inch	15026	BU 684		21 30.2 -05 30		
Heintz, 1978: +2.3, 0.00; -18.2, +0.01.						79.718	312.3	1.08	2 5 0.0 3	0.5	26
						79.797	313.9	1.16	2 7 -0.2 4	0.2	26
						79.830	312.7	1.14	2 4 0.0 3	0.2	26
						79.833	314.7	1.11	2 6 -0.1 4	0.2	26
HWE 90						21 27.3 -32 22					
78.770	285.5	1.47	2 6 +0.6 1	0.3	36	79.794	313.4	1.11	4n 0.3		26-Inch
78.784	282.5	1.40	2 7 +1.0 1	1.0	36						
78.787	283.8	1.39	2 5 +0.4 1	0.5	36						
78.780	283.9	1.42	3n 0.8		36-Inch	15045	STT 441		21 30.6 +42 12		
						86.709	326.7	6.29	2 5 -0.1 3	1.6	26
						86.788	325.3	6.36	2 7 -0.2 3	3.0	26
15000	HO 160		21 28.0 +43 04			86.802	324.9	6.23	2 6 -0.1 3	3.4	26
77.757	182.8	2.05	2 4 -0.1 3	0.6	26	86.766	325.6	6.29	3n 2.7		26-Inch
77.763	182.4	1.92	2 5 0.0 3	0.6	26						
78.529	181.0	1.96	2 5 0.0 3	0.6	26						
78.016	182.1	1.98	3n 0.6		26-Inch	15037	A 888		21 30.7 +00 05		
						79.718	48.4	0.57	2 5 0.0 3	0.2	26
						79.797	53.0	0.65	2 7 -0.1 4	0.1	26
						79.830	56.5	0.69	2 5 0.0 3	0.2	26
						79.833	53.7	0.52	2 5 0.0 4		26
HU 1629						21 28.3 -51 52					
78.800	250.4	1.22	2 4 +0.3 1	0.4	60	79.794	52.9	0.61	4n 0.2		26-Inch
78.803	251.5	1.32	2 6 +0.8 1	0.3	60						
78.808	251.5	1.31	2 4 +1.0 1	0.2	60						
78.804	251.1	1.28	3n 0.3		60-Inch	15031	OL 76		21 30.8 -22 04		
						78.800	346.2	2.79	2 4 +0.5 1	0.2	60
15005	HU 490		21 28.8 +18 10			78.803	346.8	2.68	4 6 +0.3 1	0.8	60
81.867	282.9	0.40	2 6 +0.1 4	2.0	26	78.808	348.0	2.71	1 6 +0.8 1	0.2	60
81.886	273.4	0.44	2 5 +0.1 3	1.2	26	78.804	347.0	2.73	3n 0.4		60-Inch
81.897	285.1	0.35	2 5 0.0 3	1.5	26						
81.883	280.5	0.40	3n 1.6		26-Inch		B 1008		21 30.9 -36 33		
						78.792	38.8	0.30	2 7 +0.6 1	0.2	60
						78.803	41.2	0.26	2 7 +0.6 1	0.2	60
15007	STF 2799		21 28.9 +11 05			78.806	37.6	0.26	2 8 +0.5 1	0.1	60
81.902	89.8	1.69	2 5 0.0 4	0.1	26	78.800	39.2	0.27	3n 0.2		60-Inch
83.857	90.3	1.87	2 7 0.0 3	0.0	26						
83.893	90.0	1.79	2 7 +0.5 3	0.1	26						
86.690	87.6	1.72	2 7 -0.1 3	0.1	26						
86.709	89.2	1.73	2 5 -0.5 3	0.1	26	15094	BU 166		21 33.6 +60 20		
86.712	88.8	1.69	2 4 -0.2 3	0.0	26	86.690	262.8	1.09	2 5 0.0 3	2.7	26
						86.767	260.0	1.11	4 6 -0.1 3	2.4	26
83.217	90.0	1.78	3n 0.1		26-Inch	86.788	258.3	1.17	2 6 -0.1 3	2.4	26
86.704	88.5	1.71	3n 0.1		26-Inch						
Popovic, 1986: +2.6, +0.10; +2.3, +0.02.						86.748	260.4	1.12	3n 2.5		26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

189

15103	STT 442	21 34.0 +61 48	15156	HU 372	21 38.4 +23 36
79.797	331.3	0.27 2 7 -0.1 4 0.3 26	80.657	219.6	0.25 2 7 0.0 3 0.3 26
79.808	329.5	0.33 2 5 -0.2 3 0.2 26	80.676	220.1	0.27 2 7 +0.1 4 0.0 26
79.830	327.5	0.30 2 5 0.0 3 0.1 26	80.890	225.4	0.24 2 5 -0.2 3 26
79.846	327.4	0.33 2 6 0.0 3 0.2 26	80.892	214.0	0.26 2 5 -0.1 3 0.3 26
86.690	329.4	0.25 1 6 0.0 3 0.0 26	80.779	219.8	0.26 4n 0.2 26-Inch
86.767	320.1	0.26 2 6 -0.1 3 0.0 26	15163	HL	21 39.0 -15 27
86.788	319.6	0.21 2 6 0.0 3 0.0 26	78.773	112.9	1.63 2 5 +0.5 1 2.4 36
86.802	320.8	0.24 2 6 -0.2 3 26	78.781	111.2	1.69 4 7 +0.7 1 2.8 36
79.820	328.9	0.31 4n 0.2 26-Inch	78.777	112.0	1.66 2n 2.6 36-Inch
86.762	322.5	0.24 4n 0.0 26-Inch	15177	STT 445	21 39.3 +20 43
15109	BU 74	21 35.2 +21 24	77.760	121.0	1.03 2 5 0.0 3 0.1 26
86.808	337.6	1.23 2 7 0.0 3 1.5 26	77.763	117.2	1.05 2 5 0.0 3 0.2 26
86.824	336.4	1.05 2 5 -0.1 3 2.0 26	78.529	117.4	0.93 2 4 0.0 3 0.4 26
86.830	334.8	1.12 2 8 0.0 3 1.8 26	78.551	119.4	0.98 2 6 0.0 3 26
86.849	338.3	1.16 2 7 0.0 3 1.4 26	87.788	118.4	0.91 2 4 -0.1 3 26
86.828	336.8	1.14 4n 1.7 26-Inch	87.807	119.0	1.09 2 6 -0.1 3 0.0 26
15115	HU 371	21 35.4 +24 27	87.840	116.2	0.92 2 5 0.0 3 26
78.529	296.6	0.28 2 6 -0.1 3 0.3 26	78.150	118.8	1.00 4n 0.2 26-Inch
78.551	291.6	0.25 2 7 -0.1 3 0.2 26	87.812	117.9	0.97 3n 0.0 26-Inch
78.644	294.1	0.25 2 7 -0.1 3 0.2 26	15182	A 772	21 39.5 +30 09
80.657	293.7	0.26 2 7 0.0 3 26	79.885	285.1	0.17 2 8 0.0 3 0.4 26
80.659	294.5	0.30 2 8 +0.1 3 0.4 26	79.887	285.7	0.18 2 6 -0.2 3 26
80.676	293.2	0.24 2 8 0.0 4 0.3 26	79.890	284.8	0.18 2 7 -0.2 3 0.4 26
84.716	296.3	0.23 2 5 0.0 3 0.2 26	79.923	284.4	0.18 2 8 +0.3 4 0.4 26
85.589	300.9	0.28 2 7 0.0 3 0.1 26	79.896	285.0	0.18 4n 0.4 26-Inch
86.690	302.3	0.32 2 6 +0.1 3 0.2 26	Baize, 1981: +5.1, 0.00.		
86.767	297.4	0.30 2 6 0.0 3 26	15176	BU 1212	21 39.5 -00 03
87.807	299.3	0.34 2 7 -0.1 3 0.2 26	76.728	212.8	0.25 1 7 0.0 3 0.4 26
87.840	297.0	0.31 2 5 0.0 3 26	77.746	230.1	0.26 2 6 -0.1 3 0.4 26
87.865	298.7	0.30 2 5 0.0 3 26	78.551	226.0	0.24 2 6 -0.1 3 0.4 26
87.882	298.4	0.28 2 4 0.0 3 26	78.644	230.1	0.23 2 6 0.0 3 0.4 26
78.575	294.1	0.26 3n 0.2 26-Inch	79.885	233.9	0.25 2 8 -0.2 3 0.4 26
80.664	293.8	0.27 3n 0.4 26-Inch	79.887	233.0	0.27 2 7 -0.3 3 0.6 26
85.940	299.2	0.28 4n 0.2 26-Inch	79.890	234.7	0.28 2 7 -0.3 3 0.3 26
87.848	298.4	0.31 4n 0.2 26-Inch	79.923	235.3	0.29 2 8 +0.2 3 0.4 26
Baize, 1961: +0.5, -0.04; -1.7, -0.03; -1.1, -0.03; -3.7, 0.00.			81.787	240.1	0.31 2 7 0.0 4 0.3 26
15131	HO 463	21 36.2 +42 53	81.826	244.6	0.41 2 5 -0.1 4 0.3 26
81.902	180.3	0.40 2 5 0.0 4 0.2 26	81.842	243.0	0.36 2 4 0.0 4 26
83.857	177.8	0.41 2 7 0.0 3 0.6 26	81.864	244.1	0.33 2 5 -0.1 3 0.2 26
84.713	177.8	0.52 2 6 0.0 3 0.3 26	84.795	250.0	0.32 2 7 +0.6 4 0.4 36
83.491	178.6	0.44 3n 0.4 26-Inch	84.798	249.8	0.33 2 8 +0.2 4 0.6 36
	I 1444	21 36.4 -40 41	84.801	250.7	0.32 2 7 +0.2 4 0.4 36
84.784	193.9	0.32 2 6 +0.5 3 0.1 60	77.917	224.8	0.24 4n 0.4 26-Inch
84.787	198.4	0.28 2 7 +0.4 3 0.2 60	79.896	234.2	0.27 4n 0.4 26-Inch
84.790	198.4	0.30 2 8 +0.7 3 0.2 60	81.830	243.0	0.35 4n 0.3 26-Inch
84.787	196.9	0.30 3n 0.2 60-Inch	84.799	250.2	0.32 3n 0.5 36-Inch
			Danjon, 1942: +0.7, -0.02; +0.4, -0.03; +2.2, +0.01; +1.0, -0.08.		

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

15193	A 1444		21 39.8 +37 49	15267	HO 166		21 43.9 +27 51
77.760	269.9	1.09	2 5 +0.2 3 0.0 26	77.593	97.8	0.35	2 4 0.0 3 0.0 26
77.763	270.6	1.13	2 5 -0.1 3 0.2 26	77.689	98.4	0.35	2 7 0.0 3 0.2 26
78.644	272.1	1.17	2 7 +0.1 3 0.0 26	77.722	94.6	0.34	2 5 +0.4 3 0.2 26
				77.746	98.2	0.30	2 6 0.0 3 0.1 26
78.056	270.9	1.13	3n 0.1 26-Inch	80.657	92.9	0.30	2 7 0.0 3 0.2 26
				80.659	94.6	0.35	2 7 +0.1 3 0.3 26
15225	HU 968		21 40.3 +68 23	80.676	92.8	0.29	2 7 +0.3 4 0.4 26
				80.851	95.1	0.33	2 4 +0.2 3 0.2 26
79.852	150.7	1.34	2 4 -0.2 3 1.2 26	84.716	83.2	0.33	2 5 0.0 3 0.3 26
79.885	149.2	1.26	2 7 +0.1 3 1.4 26	85.589	82.1	0.30	2 7 0.0 3 0.0 26
79.887	151.7	1.27	2 5 -0.2 3 1.4 26	86.690	77.5	0.35	2 6 +0.1 3 0.0 26
79.890	149.3	1.41	2 6 0.0 3 1.4 26	86.788	79.6	0.33	2 5 -0.1 3 26
79.878	150.2	1.32	4n 1.4 26-Inch	77.688	97.2	0.34	4n 0.1 26-Inch
				80.710	93.8	0.32	4n 0.3 26-Inch
				85.946	80.6	0.33	4n 0.1 26-Inch
15215	STT 448		21 41.0 +29 20	Couteau, 1958: -3.9, -0.05; -0.9, -0.07; -2.1, -0.03.			
80.887	201.8	0.46	2 4 0.0 3 0.8 26				
80.890	203.3	0.40	2 7 -0.3 3 0.7 26	15274	HU 693		21 44.1 +50 34
80.892	202.7	0.47	2 5 -0.2 3 0.8 26				
86.808	193.3	0.44	2 7 0.0 3 0.6 26	81.902	233.9	1.08	2 5 0.0 4 0.3 26
86.830	197.6	0.36	2 8 0.0 3 0.5 26	85.589	231.0	1.02	2 7 0.0 3 1.0 26
86.884	193.2	0.45	2 7 +0.1 3 1.0 26	86.690	231.5	1.25	2 6 0.0 3 0.7 26
				86.892	229.1	1.16	2 8 0.0 3 0.6 26
80.890	202.6	0.44	3n 0.8 26-Inch				
86.841	194.7	0.42	3n 0.7 26-Inch	85.268	231.4	1.13	4n 0.6 26-Inch
15235	HU 279		21 42.3 +07 15	15270	STF 2822		21 44.1 +28 45
86.824	358.1	2.59	1 6 -0.1 3 0.0 26	77.593	296.7	2.03	2 5 +0.1 3 1.4 26
86.884	354.6	2.40	2 7 +0.2 3 0.1 26	77.689	296.4	1.90	2 7 0.0 3 1.0 26
86.892	356.1	2.22	1 7 0.0 3 0.0 26	77.722	295.4	2.01	2 5 +0.3 3 1.2 26
				77.746	294.8	1.97	2 7 0.0 3 1.3 26
86.867	356.3	2.40	3n 0.0 26-Inch	79.797	297.0	2.03	2 7 0.0 4 1.2 26
15236	HU 280		21 42.3 +05 54	79.808	297.9	1.98	2 5 -0.3 3 1.3 26
				79.830	297.7	2.06	2 5 0.0 3 1.3 26
79.797	300.7	0.18	2 7 -0.1 4 0.0 26	79.833	297.8	2.08	2 5 0.0 4 1.3 26
79.830	305.5	0.23	2 5 -0.1 3 0.1 26	81.692	297.3	2.10	2 4 0.0 3 1.2 26
79.833	309.4	0.15	2 5 -0.1 4 0.3 26	81.785	298.1	1.95	2 4 -0.6 3 1.5 26
79.846	301.9	0.21	2 7 0.0 3 0.2 26	81.787	297.0	2.10	2 7 0.0 4 2.0 26
				81.804	299.8	2.19	2 3 0.0 3 2.0 26
79.826	304.4	0.19	4n 0.2 26-Inch	86.808	299.4	2.08	2 8 0.0 3 1.2 26
Baize, 1987: -3.7, -0.01.				86.824	300.1	2.06	2 6 0.0 3 1.2 26
				86.830	299.3	2.10	2 8 0.0 3 1.3 26
				86.849	301.2	2.04	2 7 0.0 3 1.4 26
15245	A 180		21 42.9 -02 26	77.688	295.8	1.98	4n 1.2 26-Inch
79.846	53.9	0.74	2 6 +0.1 3 0.1 26	79.817	297.6	2.04	4n 1.3 26-Inch
79.852	57.9	0.70	2 4 -0.2 3 0.2 26	81.767	298.0	2.08	4n 1.7 26-Inch
79.885	51.2	0.75	2 8 0.0 3 0.3 26	86.828	300.0	2.07	4n 1.3 26-Inch
79.887	51.4	0.67	2 5 0.0 3 0.1 26	Docobo, Costa, 1984: +1.5, -0.08; +2.1, -0.03; +1.5, +0.01; +0.8, +0.02.			
79.868	53.6	0.72	4n 0.2 26-Inch				
15255	A 1222		21 43.1 +31 48	15279	HU 375		21 45.1 -15 36
76.728	353.8	0.67	2 7 +0.1 3 0.1 26	84.798	195.2	0.15	1 7 +0.2 4 36
77.689	354.3	0.64	2 7 +0.2 3 0.1 26	84.801	195.4	0.13	2 8 +0.2 4 0.0 36
77.746	354.1	0.61	2 6 0.0 3 0.3 26				
				84.800	195.3	0.14	2n 0.0 36-Inch

191

FIN 283				21 46.6 -57 40				COU 14				21 50.1 +17 18			
78.792	301.9	0.23	2 7 +0.5 1 0.2 60	80.657	357.7	0.18	2 7 +0.1 3 0.7 26								
78.803	304.4	0.23	2 6 +0.6 1 0.3 60	80.659	5.8	0.16	3 7 +0.2 4 0.8 26								
78.806	300.6	0.22	2 7 +0.4 1 0.1 60	80.676	359.7	0.17	3 7 0.0 4 1.2 26								
				80.928	10.6	0.19	1 7 +0.6 4 1.3 26								
78.800	302.3	0.23	3n 0.2 60-Inch	81.826	19.3	0.27	3 5 -0.1 4 1.2 26								
				81.864	19.6	0.28	2 5 -0.1 3 1.2 26								
Finsen, 1977 (1): -4.6, -0.05.				81.867	19.9	0.18	2 6 0.0 4 0.7 26								
(2): -5.9, -0.05.				81.897	14.5	0.20	2 6 -0.2 3 1.0 26								
				83.857	34.5	0.28	2 7 0.0 3 1.2 26								
15319	HO 608		21 46.8 +27 18	83.875	32.0	0.28	2 7 +0.2 3 1.5 26								
83.857	126.3	0.47	2 6 0.0 3 0.8 26	86.808	52.4	0.34	2 6 0.0 3 1.0 26								
85.589	128.3	0.44	2 6 0.0 3 1.0 26	86.824	55.5	0.34	2 6 0.0 3 0.6 26								
86.690	127.3	0.70	2 5 +0.1 3 1.2 26	86.830	52.1	0.34	2 7 0.0 3 0.6 26								
86.892	126.9	0.52	2 7 +0.1 3 0.6 26	86.849	50.9	0.35	2 7 0.0 3 1.2 26								
				80.730	3.4	0.18	4n 1.0 26-Inch								
85.757	127.2	0.53	4n 0.9 26-Inch	81.864	18.3	0.23	4n 1.0 26-Inch								
				83.866	33.2	0.28	2n 1.4 26-Inch								
				86.828	52.7	0.34	4n 0.9 26-Inch								
15307	SEE 458		21 46.8 -26 35	Heintz,	1982: +5.5, -0.01; +4.3, 0.00;										
					+2.5, -0.03; +7.9, -0.04.										
78.773	89.7	1.02	2 5 +0.5 1 0.5 36	Costa, Docobo,	1985: +0.6, -0.01; -0.8, 0.00;										
78.787	86.7	0.90	2 5 +0.5 1 0.8 36		-2.5, -0.04; +2.2, -0.03.										
78.789	89.5	1.01	2 8 +0.7 1 1.2 36	Baize,	1985: -1.5, -0.03; -1.7, -0.04;										
					-0.9, -0.08; +4.0, -0.09.										
78.783	88.6	0.98	3n 0.8 36-Inch	15373	HO 467		21 50.6 +22 15								
15313	STF 2825		21 46.9 +00 51	79.808	220.4	2.38	2 5 -0.3 3 2.8 26								
78.836	132.9	0.59	2 5 -0.2 3 0.3 26	79.830	219.4	2.48	2 5 0.0 3 2.4 26								
78.839	131.5	0.68	2 6 -0.2 3 0.2 26	79.833	217.2	2.21	2 4 -0.1 4 1.5 26								
79.797	134.2	0.70	2 7 -0.1 4 0.1 26	79.852	221.2	2.40	2 5 -0.2 3 2.0 26								
				79.831	219.3	2.37	4n 2.2 26-Inch								
79.157	132.9	0.66	3n 0.2 26-Inch	15368	A 301		21 50.6 -07 47								
15322	HWE 58 AB		21 47.4 -13 09	84.795	124.8	0.81	2 7 +0.5 4 0.2 36								
78.800	87.8	0.68	2 5 +0.5 2 0.8 60	84.798	127.9	0.85	2 8 +0.3 4 0.2 36								
78.803	89.6	0.66	2 5 +1.2 2 0.9 60	84.801	126.9	0.86	2 7 +0.2 4 0.1 36								
78.806	87.4	0.71	2 7 +0.6 2 1.5 60												
				84.798	126.5	0.84	3n 0.2 36-Inch								
78.803	88.3	0.68	3n 1.1 60-Inch	15371	SEE 460		21 50.9 -20 32								
				78.800	154.1	0.49	1 5 +0.5 1 0.3 60								
				78.806	155.6	0.58	2 7 +0.7 1 0.4 60								
				78.808	155.3	0.54	2 5 +0.4 1 0.2 60								
				78.805	155.0	0.54	3n 0.3 60-Inch								
15330	BAR 15		21 47.7 -01 43	15398	HU 972		21 51.1 +66 50								
78.781	119.9	0.28	2 6 +0.7 1 0.5 36	81.653	42.1	0.25	2 6 -0.4 3 0.2 26								
78.784	119.7	0.30	2 6 +0.8 1 0.3 36	81.897	35.4	0.26	2 5 0.0 3 0.6 26								
78.789	117.7	0.28	2 8 +0.6 1 0.4 36	81.902	37.4	0.25	2 5 0.0 4 0.8 26								
80.657	119.2	0.30	2 7 0.0 3 0.4 26												
80.659	120.8	0.34	2 7 +0.1 3 0.8 26	81.817	38.3	0.25	3n 0.7 26-Inch								
80.676	115.2	0.34	2 6 +0.2 4 0.3 26	Baize, 1981: -11.3, +0.04.											
78.785	119.1	0.29	3n 0.4 36-Inch												
80.664	118.4	0.33	3n 0.5 26-Inch												

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

FIN 3/4			21 53.3 -46 50			15447			BU 75			21 55.5 +10 53		
84.787	311.6	0.15	2 7	+0.3 3	0.0 60	76.728	294.8	0.18	2 7	+0.1 4	0.0 26			
84.790	306.5	0.12	2 7	+0.5 3	0.0 60	77.689	300.8	0.14	3 7	0.0 3	0.0 26			
84.793	311.6	0.13	2 7	-0.1 3	0.0 60	77.746	307.6	0.22	2 6	0.0 3	0.2 26			
						78.551	325.9	0.20	1 6	-0.1 3	0.3 26			
84.790	309.9	0.13	3n	0.0	60-Inch	78.836	313.0	0.12	2 5	-0.2 3	0.0 26			
						78.839	312.2	0.22	2 6	0.0 3	0.0 26			
						79.797	323.4	0.23	2 7	0.0 4	0.3 26			
						79.830	327.9	0.25	3 5	+0.1 3	0.2 26			
						79.846	329.4	0.27	2 7	0.0 4	0.3 26			
						79.885	329.4	0.25	2 7	0.0 4	0.4 26			
15419	HU 380 BC		21 53.8	-20 01		80.657	335.0	0.28	2 7	0.0 3	0.5 26			
						80.659	337.9	0.25	2 7	+0.2 4	0.5 26			
78.781	282.5	0.28	2 6	+0.7 1	0.0 36	80.676	335.9	0.23	1 7	0.0 4	0.4 26			
78.784	286.9	0.31	2 8	+0.8 1	0.2 36	80.928	333.4	0.25	2 7	+0.5 4	0.4 26			
78.787	286.1	0.27	2 5	+0.4 1	36	81.653	341.6	0.28	3 6	-0.2 3	0.5 26			
84.776	274.0	0.27	2 6	+0.5 3	0.3 60	81.787	341.9	0.28	2 6	0.0 4	0.3 26			
84.782	276.0	0.32	2 7	+0.3 3	0.2 60	81.826	337.7	0.33	2 6	-0.2 4	0.4 26			
84.784	275.5	0.34	2 5	+0.5 3	0.2 60	81.842	338.7	0.30	2 5	-0.2 4	0.5 26			
						83.893	357.6	0.37	1 6	+0.2 3	0.3 26			
78.784	285.2	0.29	3n	0.1	36-Inch	84.713	353.0	0.36	1 6	+0.1 3	0.4 26			
84.781	275.2	0.31	3n	0.2	60-Inch	84.716	352.9	0.35	1 5	+0.2 3	0.5 26			
						85.589	358.4	0.39	1 6	0.0 3	0.3 26			
Baize, 1959: +10.4, -0.03; +10.2, -0.06.						86.690	358.5	0.51	1 6	+0.1 3	0.3 26			
						86.767	359.0	0.51	1 5	0.0 3	0.3 26			
						86.788	358.2	0.50	1 5	0.0 3	26			
						86.808	1.9	0.56	1 6	0.0 3	0.4 26			
						77.388	301.1	0.18	3n	0.1	26-Inch			
						78.742	317.0	0.18	3n	0.1	26-Inch			
15431	COU 432 BP		21 54.3	+19 43		79.840	327.5	0.24	4n	0.3	26-Inch			
79.830	11.2	0.19	3 5	0.0 3	0.0 26	80.730	335.6	0.25	4n	0.4	26-Inch			
79.846	3.7	0.13	3 6	0.0 4	26	81.777	340.0	0.30	4n	0.4	26-Inch			
79.885	2.3	0.17	2 7	0.0 4	26	84.441	354.5	0.36	3n	0.4	26-Inch			
79.923	1.6	0.14	3 8	+0.2 4	0.2 26	86.528	359.2	0.52	5n	0.3	26-Inch			
						Baize, 1974: -6.3, -0.04; -3.6, -0.06; -1.7, -0.03; +0.7, -0.04; -0.5, -0.02; +3.7, -0.04. +2.7, +0.05.								
79.871	4.7	0.16	4n	0.1	26-Inch									
15435	A 620		21 54.5	+44 03		15452	STT 452		21 55.7	+07 15				
80.890	273.5	0.43	2 3	-0.2 3	26	79.808	181.0	0.82	1 5	-0.3 3	0.6 26			
80.892	280.2	0.30	2 4	-0.2 3	0.3 26	79.852	179.3	0.90	1 4	-0.2 3	0.7 26			
81.653	279.2	0.35	2 6	-0.3 3	0.0 26	79.885	181.3	0.89	1 7	+0.1 4	0.8 26			
81.787	276.8	0.34	2 7	-0.1 4	0.0 26	79.887	182.7	0.99	1 4	0.0 3	0.8 26			
						79.858	181.1	0.90	4n	0.7	26-Inch			
81.306	277.4	0.36	4n	0.1	26-Inch									
	HDO 296		21 55.2	-61 53		15461	STT 454		21 56.1	+24 20				
78.770	104.7	0.32	2 6	+0.2 1	0.2 36	86.824	278.2	7.47	2 5	+0.1 3	1.8 26			
78.773	105.9	0.42	2 5	+0.5 1	0.2 36	86.830	277.9	7.14	2 7	0.0 3	0.7 26			
78.776	105.1	0.29	2 5	+0.9 1	0.2 36	86.849	278.5	7.24	2 7	0.0 3	1.0 26			
84.776	107.9	0.21	2 6	+0.4 3	0.3 60	86.834	278.2	7.28	3n	1.2	26-Inch			
84.782	109.6	0.23	2 6	+0.1 3	0.2 60									
84.784	111.5	0.25	2 6	+0.4 3	0.3 60	15464	STT 453		21 56.5	+07 14				
						79.808	274.2	0.67	2 5	-0.2 3	0.3 26			
78.773	105.2	0.34	3n	0.2	36-Inch	79.852	274.5	0.57	2 4	-0.1 3	0.7 26			
84.781	109.7	0.23	3n	0.3	60-Inch	79.885	271.1	0.76	2 7	+0.2 4	0.5 26			
						79.887	272.1	0.79	2 5	0.0 3	0.5 26			
Finsen, 1969: -5.8, -0.01; -7.9, +0.01.						79.858	273.0	0.70	4n	0.5	26-Inch			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

193

15466	HU 381	21 56.6 +06 32		LEO 51	21 59.4 -10 12
76.920	231.1	0.38	2 5 0.0 3 0.1 26	84.795	258.0 3.24 2 7 +0.5 4 0.2 36
76.925	232.5	0.34	2 5 +0.3 3 0.2 26	84.798	259.8 3.10 2 8 +0.2 4 0.3 36
77.689	233.5	0.31	2 6 +0.1 3 0.1 26	84.801	260.0 3.30 2 7 +0.2 4 0.4 36
77.746	233.3	0.37	2 6 0.0 3 0.2 26	84.798	259.3 3.21 3n 0.3 36-Inch
77.320	232.6	0.35	4n 0.1 26-Inch		
15478	A 622	21 57.2 +10 48		15538	A 779 21 59.7 +60 33
78.839	121.3	0.18	2 7 -0.2 3 26	81.653	268.3 0.34 2 5 0.0 3 1.0 26
79.797	124.6	0.14	2 7 0.0 4 26	81.842	270.5 0.31 2 5 0.0 4 1.2 26
79.846	127.3	0.18	2 7 0.0 4 26	81.864	267.8 0.29 2 5 -0.1 3 0.8 26
79.885	128.2	0.17	2 7 0.0 4 26	81.786	268.9 0.31 3n 1.0 26-Inch
79.592	125.4	0.17	4n 26-Inch		
15497	HU 772	21 57.6 +49 38		15547	HD 175 22 00.9 +43 39
81.897	144.1	0.30	2 7 -0.2 3 0.1 26	81.897	310.3 1.00 2 7 -0.1 3 1.4 26
81.902	142.4	0.33	2 5 0.0 4 0.2 26	81.902	307.8 1.02 2 5 +0.1 4 2.5 26
81.924	146.1	0.35	2 5 +0.2 4 26	81.924	313.0 1.01 2 5 0.0 4 2.6 26
81.908	144.2	0.33	3n 0.1 26-Inch	81.908	310.6 1.01 3n 2.2 26-Inch
15488	A 891	21 57.7 -00 37		15569	A 307 22 02.5 +26 12
76.920	72.4	0.48	2 5 -0.2 3 0.2 26	77.760	150.7 0.68 2 5 -0.1 3 0.5 26
76.925	74.4	0.56	2 5 +0.5 3 0.2 26	77.763	152.1 0.60 1 5 -0.3 3 0.8 26
77.689	76.5	0.63	2 6 +0.1 3 0.4 26	78.836	150.5 0.61 2 5 -0.2 3 0.7 26
77.746	74.2	0.49	2 5 +0.1 3 0.0 26	78.120	151.1 0.63 3n 0.6 26-Inch
77.320	74.4	0.54	4n 0.2 26-Inch		
	FIN 307	21 57.9 -54 59		15618	A 894 22 04.3 +73 11
78.792	62.9	0.14	3 6 +0.5 1 0.0 60	81.653	146.8 0.40 2 5 0.0 3 26
78.803	62.2	0.10	1 6 +0.5 1 0.0 60	81.787	148.5 0.53 2 6 +0.1 4 0.2 26
78.806	70.8	0.10	2 7 +0.3 1 0.0 60	81.826	141.0 0.47 2 5 -0.1 4 0.2 26
78.800	65.3	0.11	3n 0.0 60-Inch	81.755	145.4 0.43 3n 0.2 26-Inch
Churms, 1965 (1): +2.7, +0.03. (2): -0.5, +0.04.				15599	BU 696 22 04.5 +15 52
15501	A 304	21 58.5 +27 25		79.808	187.2 0.28 2 5 -0.2 3 26
81.653	114.0	0.55	2 6 -0.1 3 0.8 26	79.846	186.1 0.24 2 6 0.0 4 0.1 26
81.787	120.3	0.49	2 7 +0.1 4 0.8 26	79.885	180.6 0.22 2 7 +0.2 4 0.3 26
81.826	114.5	0.50	2 6 0.0 4 0.8 26	79.890	179.6 0.23 2 6 -0.2 3 0.2 26
81.842	118.5	0.44	2 5 -0.1 4 0.6 26	86.808	187.9 0.18 1 6 0.0 3 26
81.777	116.8	0.50	4n 0.8 26-Inch	86.830	188.3 0.18 2 7 0.0 3 26
	B 546	21 58.5 -53 01		86.892	186.7 0.14 2 8 -0.2 3 26
78.770	344.6	0.56	2 6 +0.1 1 0.1 36	79.857	183.4 0.24 4n 0.2 26-Inch
78.773	343.3	0.59	2 5 +0.6 1 0.0 36	86.843	187.6 0.17 3n 26-Inch
78.784	344.7	0.57	2 7 +0.5 1 0.2 36		SEE 466 22 05.0 -39 42
78.776	344.2	0.57	3n 0.1 36-Inch	78.808	258.1 1.97 2 4 +0.5 1 0.7 60
				78.808	258.1 1.97 1n 0.7 60-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

15623	BU 990	22 05.1 +63 05		15673	STF 2868	22 09.4 +22 32	
81.842	133.4	0.63	2 5 0.0 4 0.6 26	80.659	355.7	1.19	2 7 +0.1 4 0.6 26
81.864	128.2	0.56	2 5 -0.1 3 1.2 26	80.676	354.2	1.12	2 7 0.0 4 0.4 26
81.867	134.3	0.63	2 6 -0.1 4 0.8 26	80.851	356.0	1.09	2 4 0.0 3 0.3 26
81.886	132.0	0.55	2 5 -0.3 3 0.8 26				
81.865	132.0	0.59	4n 0.8 26-Inch	80.729	355.3	1.13	3n 0.4 26-Inch
15613	A 1453	22 05.4 +38 58			COU 136	22 10.1 +23 07	
78.839	326.2	0.41	2 7 0.0 3 0.3 26	79.915	48.5	0.39	2 5 -0.2 3 0.2 26
79.797	323.1	0.48	2 7 0.0 4 0.3 26	79.923	50.7	0.35	2 7 0.0 4 0.3 26
79.830	326.2	0.48	2 5 +0.1 3 0.3 26	79.945	48.3	0.34	2 5 +0.1 3 0.3 26
79.890	329.9	0.45	2 6 -0.1 3 0.3 26	86.808	37.4	0.47	2 7 0.0 3 0.0 26
79.589	326.4	0.46	4n 0.3 26-Inch	86.824	40.8	0.42	2 6 0.0 3 0.1 26
	B 548	22 05.6 -58 58		86.830	40.1	0.41	2 7 0.0 3 0.1 26
78.770	218.3	0.23	2 6 +0.2 1 36	79.928	49.2	0.36	3n 0.3 26-Inch
78.773	223.2	0.21	2 6 +0.5 1 36	86.821	39.4	0.43	3n 0.1 26-Inch
78.781	223.7	0.17	2 7 +0.7 1 36				
78.775	221.7	0.20	3n 36-Inch	15701	A 2494	22 10.9 +42 11	
15614	STF 2856	22 05.8 +04 52		78.839	358.0	0.29	2 7 -0.1 3 0.0 26
86.884	198.5	1.23	1 7 0.0 3 0.8 26	79.797	1.2	0.29	2 7 0.0 4 0.4 26
86.892	193.9	1.16	1 7 -0.1 3 0.8 26	79.830	352.1	0.28	2 5 0.0 3 0.0 26
86.928	196.0	1.24	1 4 +0.1 3 0.8 26	79.846	356.9	0.34	2 6 +0.1 4 0.1 26
86.901	196.1	1.21	3n 0.8 26-Inch	79.578	357.0	0.30	4n 0.2 26-Inch
	I 381	22 06.0 -56 28			EGG 4	22 11.0 +24 29	
78.770	97.5	1.92	2 5 +0.3 1 2.4 36	84.713	156.0	0.50	2 7 +0.1 3 0.4 26
78.773	102.7	1.76	4 5 +0.7 1 2.2 36	84.872	154.5	0.44	2 5 0.0 3 26
78.781	96.2	1.62	2 6 +0.8 1 2.5 36	85.589	154.6	0.39	2 6 0.0 3 0.2 26
78.775	98.8	1.77	3n 2.4 36-Inch	85.058	155.0	0.44	3n 0.3 26-Inch
15639	STF 2862	22 07.1 +00 34		15707	STT 464	22 11.3 +40 11	
85.589	98.9	2.42	2 6 0.0 3 0.7 26	79.808	135.9	0.25	2 5 -0.2 3 26
86.690	96.6	2.37	2 6 0.0 3 0.4 26	79.830	138.4	0.26	2 5 +0.1 3 26
86.892	98.3	2.43	2 8 +0.1 3 0.5 26	79.846	139.6	0.26	2 6 +0.2 3 26
86.390	97.9	2.41	3n 0.5 26-Inch	79.890	139.1	0.22	2 6 -0.1 3 0.2 26
	COU 537	22 07.7 +26 21		79.844	138.2	0.25	4n 0.2 26-Inch
86.884	35.2	0.19	2 6 0.0 3 26	15718	A 409	22 11.6 +40 56	
86.892	37.2	0.10	2 8 0.0 3 26	81.902	17.3	0.35	2 4 0.0 4 26
86.888	36.2	0.14	2n 26-Inch	81.924	21.0	0.46	2 4 0.0 4 26
	HU 1543	22 08.7 -56 27		83.893	13.5	0.42	2 4 0.0 3 0.3 26
84.784	315.5	1.46	2 6 +0.4 3 2.2 60	82.573	17.3	0.41	3n 0.3 26-Inch
84.787	311.6	1.51	2 5 +0.2 3 1.5 60	15721	ES 1178	22 11.7 +49 41	
84.790	316.0	1.44	2 8 +0.4 3 2.2 60	76.703	118.7	1.55	2 5 -0.2 3 0.1 26
84.787	314.4	1.47	3n 2.0 60-Inch	77.689	117.9	1.84	2 7 +0.1 3 0.1 26
				77.746	116.8	1.68	2 6 0.0 3 0.2 26
				77.379	117.8	1.69	3n 0.1 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

195

	MLB 723		22 12.0 +25 46	15792	HU 696		22 15.7 +51 52
86.836	345.1	2.64	2 7 0.0 3 0.4 26	78.836	241.0	0.22	2 5 -0.2 3 0.0 26
86.849	342.9	2.50	2 7 0.0 3 0.5 26	78.839	238.7	0.22	2 6 -0.1 3 0.2 26
86.851	341.2	2.07	2 7 0.0 3 0.4 26	79.797	239.9	0.28	2 7 0.0 4 0.3 26
86.843	343.1	2.40	3n 0.4 26-Inch	79.157	239.9	0.24	3n 0.2 26-Inch
15725	BU 475		22 12.6 -08 00	15794	HO 180		22 15.8 +43 54
84.795	175.5	0.75	1 8 +0.5 4 2.2 36	76.703	233.6	0.78	2 4 -0.2 3 0.2 26
84.798	176.4	0.91	2 7 +0.5 4 2.4 36	77.746	236.5	0.80	2 6 0.0 3 0.4 26
84.801	181.7	0.88	1 7 +0.1 4 2.5 36	77.760	239.4	0.67	2 5 -0.1 3 0.4 26
84.798	177.9	0.85	3n 2.4 36-Inch	77.403	236.5	0.75	3n 0.3 26-Inch
					RST 4098		22 15.9 -13 14
15748	A 626		22 12.8 +60 13	84.782	16.8	0.35	2 7 0.0 3 0.8 60
80.676	101.0	0.79	2 5 0.0 4 0.0 26	84.784	10.0	0.42	2 4 +0.7 3 1.0 60
80.890	102.3	0.84	2 5 -0.4 3 0.1 26	84.787	13.8	0.33	2 6 +0.2 3 0.3 60
80.892	103.2	0.79	2 4 -0.3 3 0.7 26	84.782	13.5	0.37	3n 0.7 60-Inch
80.819	102.2	0.81	3n 0.3 26-Inch		B 2501		22 15.9 -58 00
				84.773	151.7	1.37	2 5 0.0 3 0.2 60
15735	HU 978		22 12.8 +13 55	84.784	152.4	1.26	2 5 +0.4 3 0.0 60
79.852	212.5	1.04	2 4 -0.3 3 0.5 26	84.793	148.8	1.17	2 7 -0.4 3 0.1 60
79.887	210.0	1.14	2 5 -0.2 3 0.7 26	84.783	151.0	1.27	3n 0.1 60-Inch
79.890	211.8	1.13	2 7 0.0 3 0.5 26		COU 1191		22 16.4 +34 38
79.915	213.0	1.13	2 5 -0.3 3 0.6 26	86.830	204.2	0.44	2 7 0.0 3 0.5 26
79.886	211.8	1.11	4n 0.6 26-Inch	86.849	210.5	0.44	2 6 0.0 3 26
				86.884	206.2	0.38	2 7 0.0 3 0.6 26
15767	STF 2878		22 14.5 +07 59	86.854	207.0	0.42	3n 0.6 26-Inch
81.864	118.9	1.43	2 5 0.0 3 1.3 26		15822	A 782	22 17.4 +71 57
81.867	118.9	1.43	2 6 -0.2 4 1.0 26	81.653	289.0	0.43	2 5 0.0 3 0.4 26
81.886	118.1	1.40	4 6 -0.3 3 1.2 26	81.787	290.7	0.41	2 7 0.0 4 0.4 26
81.897	118.3	1.39	2 7 +0.1 3 0.8 26	81.826	290.3	0.46	2 5 -0.1 4 0.2 26
81.878	118.6	1.41	4n 1.1 26-Inch	81.755	290.0	0.43	3n 0.3 26-Inch
15769	STF 2881		22 14.6 +29 35		15833	A 627	22 19.0 +60 12
81.864	81.6	1.35	2 6 0.0 3 0.3 26	77.689	135.1	1.05	2 7 0.0 3 0.8 26
81.867	83.4	1.22	2 6 -0.1 4 0.4 26	77.760	133.8	1.05	2 5 -0.2 3 0.6 26
81.886	82.7	1.36	2 6 -0.2 3 0.4 26	77.763	137.4	1.09	2 5 -0.4 3 0.4 26
81.897	81.7	1.29	2 7 0.0 3 0.3 26	77.737	135.4	1.06	3n 0.6 26-Inch
81.878	82.4	1.30	4n 0.3 26-Inch		15834	A 1461	22 19.1 +56 07
15772	AG 281		22 14.8 +21 57	81.787	91.8	1.68	2 7 0.0 4 0.2 26
84.872	17.8	2.57	2 5 0.0 3 0.3 26	81.842	93.6	1.71	2 5 -0.1 4 0.5 26
85.589	21.2	2.59	1 6 0.0 3 0.8 26	81.856	92.3	1.71	2 6 -0.3 3 0.8 26
86.690	27.2	2.58	2 4 0.0 3 0.5 26	81.864	92.6	1.70	3n 0.5 26-Inch
85.717	19.7	2.58	3n 0.5 26-Inch				

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

15835	HU 383	22 19.6 +21 07		RST 33U1	22 23.1 -22 57
76.728	27.9	0.31	2 7 0.0 4 0.1 25	84.787	250.2 0.72 2 6 +0.2 3 0.8 60
77.689	35.3	0.33	2 6 +0.2 3 0.0 26	84.790	252.3 0.67 2 7 +0.8 3 0.6 60
77.746	31.0	0.33	2 6 0.0 3 0.0 26	84.793	252.2 0.62 2 7 +0.1 3 1.0 60
77.763	37.9	0.30	2 5 -0.2 3 0.0 26		
77.482	33.0	0.32	4n 0.0 26-Inch	84.790	251.6 0.67 3n 0.8 60-Inch
				WOR 11	22 23.4 +32 28
15843	BU 1216	22 20.2 +29 31		77.689	176.1 1.72 2 6 +0.2 3 0.2 26
79.915	286.8	0.93	2 5 -0.4 3 0.3 26	77.746	176.6 1.73 2 6 0.0 3 0.1 26
79.923	286.2	0.91	2 7 -0.2 4 0.3 26	77.760	177.3 1.84 2 5 0.0 3 0.0 26
79.945	288.2	0.89	2 5 +0.1 3 0.4 26	77.763	179.3 1.87 2 5 -0.4 3 0.1 26
				83.857	187.6 1.77 2 7 -0.2 3 0.3 26
79.928	287.1	0.91	3n 0.3 26-Inch	83.893	190.2 1.70 2 6 0.0 3 0.2 26
				86.830	194.7 1.72 2 7 0.0 3 0.0 26
				86.884	192.3 1.58 2 7 0.0 3 26
15856	BU 379	22 20.6 +53 49		77.740	177.3 1.79 4n 0.1 26-Inch
80.676	333.6	1.15	2 5 0.0 4 0.3 26	83.875	188.9 1.74 2n 0.2 26-Inch
80.890	334.8	1.22	2 5 -0.4 3 0.4 26	86.857	193.5 1.65 2n 0.0 26-Inch
80.892	336.2	1.21	2 4 -0.3 3 0.6 26		
80.819	334.9	1.19	3n 0.4 26-Inch	15902	BU 172 22 24.1 -04 51
				78.784	282.9 0.24 2 7 +0.5 1 36
				78.787	278.9 0.24 2 6 +0.4 1 0.0 36
				78.789	279.1 0.25 2 8 +0.3 1 0.0 36
	RST 1130	22 21.2 -51 08		79.797	277.0 0.25 2 7 +0.2 4 0.2 26
78.770	134.1	2.90	2 5 +0.2 1 1.1 36	79.846	276.2 0.26 2 7 +0.1 4 0.2 26
78.781	133.8	2.95	2 6 +0.6 1 1.5 36	79.885	276.2 0.24 2 7 0.0 4 0.1 26
78.789	133.7	2.64	2 8 +0.8 1 0.7 36	79.887	277.3 0.21 2 5 -0.2 3 0.2 26
				82.825	266.5 0.14 2 6 -0.1 3 0.0 26
78.780	133.9	2.83	3n 1.1 36-Inch	83.893	245.0 0.16 2 6 0.0 3 0.0 26
				84.776	220.4 0.16 2 7 +0.1 3 0.0 60
				84.782	219.2 0.14 2 7 0.0 3 0.0 60
	B 557	22 22.0 -54 31		84.784	220.2 0.15 2 6 +0.7 3 0.0 60
78.792	307.9	0.24	2 7 +0.3 1 0.2 60	78.787	280.3 0.24 3n 0.0 36-Inch
78.800	307.5	0.13	2 4 +0.1 1 0.5 60	79.854	276.7 0.24 4n 0.2 26-Inch
78.806	308.6	0.25	2 7 +0.3 1 0.2 60	83.359	255.8 0.15 2n 0.0 26-Inch
				84.781	219.9 0.15 3n 0.0 60-Inch
78.800	308.0	0.22	3n 0.3 60-Inch		
				Baize, 1984: +0.2, -0.01; + 2.0, +0.01; +5.4, -0.04; -17.4, -0.03.	
15877	A 2694	22 22.5 -07 28		15936	HU 596 22 26.5 +19 25
78.784	182.1	0.33	1 8 +0.5 1 0.1 36	79.852	200.1 1.21 2 4 -0.4 3 0.4 26
78.787	186.1	0.35	1 5 +0.4 1 0.2 36	79.887	200.4 1.20 2 5 -0.1 3 0.4 26
78.789	136.1	0.33	1 8 +0.2 1 0.2 36	79.890	198.6 1.19 2 6 -0.2 3 0.5 26
				79.915	202.0 1.22 2 5 -0.4 3 0.3 26
78.787	187.1	0.34	3n 0.2 36-Inch		
				79.886	200.3 1.20 4n 0.4 26-Inch
	I 134	22 22.5 -56 09			
78.770	287.1	0.53	2 5 +0.3 1 0.6 36		HU 1639 22 27.3 -50 04
78.781	286.5	0.38	2 5 +0.7 1 0.7 36	84.773	72.6 0.65 2 5 +0.3 3 0.8 60
78.787	291.5	0.39	2 4 +1.0 1 0.6 36	84.776	74.4 0.73 2 6 +0.4 3 0.8 60
78.789	287.2	0.43	2 8 +0.9 1 0.8 36	84.790	74.5 0.67 2 6 +0.2 3 0.8 60
78.782	288.1	0.43	4n 0.7 36-Inch	84.780	73.8 0.68 3n 0.8 60-Inch

Residuals are from the photocentric orbit. The later Heintz orbit gives similar residuals, while the Costa, Docobo residuals are larger. Harrington has shown that the orbit is essentially indeterminate.

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

RST 1133					22 28.8 -49 15					RST 4703					22 30.0 -06 04				
78.770	105.2	0.99	2 5	+0.2 1 0.0 36	84.795	53.5	1.67	2 7	+0.3 4 0.1 36										
78.773	108.1	0.79	2 5	+0.5 1 0.0 36	84.798	52.3	1.59	2 7	+0.2 4 0.1 36										
78.781	109.2	0.84	2 5	+0.8 2 0.2 36	84.801	54.8	1.68	2 8	-0.1 4 0.1 36										
78.775	107.5	0.87	3n	0.1 36-Inch	84.798	53.5	1.65	3n	0.1 36-Inch										
15976	HU 1317	22 29.0 +14 20			15992	HU 388	22 30.3 +22 28												
79.852	125.5	0.46	2 5	-0.4 3 0.2 26	78.737	50.1	0.39	2 5	0.0 3 0.2 26										
79.885	128.4	0.45	2 7	0.0 4 0.2 26	78.839	47.9	0.34	2 7	+0.1 3 0.0 26										
79.887	131.2	0.43	2 5	0.0 3 0.2 26	78.932	50.5	0.36	2 5	+0.6 3 0.2 26										
79.890	127.1	0.46	2 7	0.0 3 0.2 26	81.842	45.8	0.39	2 6	-0.1 4 0.2 26										
79.878	128.0	0.45	4n	0.2 26-Inch	81.864	48.9	0.40	2 5	0.0 3 0.2 26										
					81.867	46.7	0.43	2 6	-0.3 3 0.3 26										
					81.886	50.2	0.40	2 6	-0.3 3 0.3 26										
15984	BU 76	22 29.5 -00 12			78.836	49.5	0.36	3n	0.1 26-Inch										
79.890	357.9	1.65	1 7	0.0 3 2.2 26	81.865	47.9	0.40	4n	0.3 26-Inch										
79.915	356.6	1.74	1 5	-0.2 3 1.3 26	Baize, 1976: -2.4, -0.02; -6.0, 0.00.														
79.923	357.3	1.74	1 7	-0.1 4 1.8 26	Costa, Docobo, 1983: +2.9, +0.02;														
79.945	357.8	1.92	1 4	+0.2 3 1.8 26	-0.6, +0.06.														
79.918	357.4	1.76	4n	1.8 26-Inch	RST 3302	22 30.3 -20 33													
					84.795	56.8	1.17	2 7	+0.4 4 0.2 36										
					84.798	53.0	1.38	2 7	+0.3 4 0.0 36										
					84.801	54.2	1.36	4 7	+0.4 4 36										
15995	HU 1318	22 29.9 +51 22			84.798	54.7	1.30	3n	0.1 36-Inch										
80.890	15.5	0.78	2 5	-0.3 3 0.2 26	16011	HU 981	22 30.5 +61 38												
80.892	12.4	0.82	2 3	-0.3 3 0.2 26	78.839	222.9	0.25	2 7	-0.1 3 0.2 26										
81.653	13.6	0.78	2 5	-0.2 3 0.2 26	78.948	220.0	0.26	2 5	+0.1 3 0.3 26										
81.145	13.8	0.79	3n	0.1 26-Inch	79.797	221.8	0.31	2 8	-0.2 4 0.3 26										
					79.852	225.5	0.30	2 5	-0.1 3 0.0 26										
15988	STF 2912	22 30.0 +04 26			79.923	226.4	0.32	2 7	0.0 4 0.2 26										
78.948	116.7	0.79	2 5	0.0 3 1.6 26	85.589	214.3	0.30	2 5	0.0 3 26										
79.718	115.1	0.84	2 5	+0.1 3 1.2 26	86.690	222.0	0.33	2 6	0.0 3 26										
79.797	114.1	0.80	2 8	+0.1 4 0.8 26	86.767	221.4	0.26	2 6	-0.1 3 0.0 26										
79.846	115.1	0.88	2 7	+0.2 4 1.2 26	86.788	224.7	0.35	2 5	-0.5 3 26										
81.842	116.8	0.73	2 5	-0.2 4 0.8 26	79.472	223.3	0.31	5n	0.2 26-Inch										
81.864	113.4	0.81	2 5	-0.1 3 1.2 26	86.458	220.6	0.31	4n	0.0 26-Inch										
81.867	116.0	0.78	2 5	-0.1 3 1.2 26	16009	HU 1319	22 30.7 +48 56												
81.886	115.2	0.81	2 5	-0.1 3 1.5 26	79.923	36.0	0.29	2 7	0.0 4 26										
83.857	113.8	0.72	2 5	+0.1 3 1.2 26	81.787	37.3	0.29	2 7	0.0 4 26										
83.893	117.4	0.80	2 5	+0.2 3 1.2 26	81.826	43.0	0.27	2 5	0.0 4 0.2 26										
84.716	116.0	0.86	2 5	0.0 3 1.2 26	81.842	37.4	0.28	2 6	-0.1 4 0.1 26										
84.872	117.1	0.61	2 5	-0.1 3 26	81.544	38.4	0.28	4n	0.1 26-Inch										
86.808	115.8	0.66	2 6	+0.1 3 1.0 26	16004	A 1466	22 30.7 +39 23												
86.824	116.0	0.69	2 5	0.0 3 1.2 26	81.864	165.0	0.73	2 6	0.0 3 0.3 26										
86.830	114.7	0.61	2 7	0.0 3 1.0 26	81.886	169.3	0.86	2 5	-0.5 3 0.5 26										
86.849	117.6	0.65	2 5	-0.1 3 1.4 26	81.897	167.1	0.76	2 6	-0.2 3 0.3 26										
79.577	115.2	0.83	4n	1.2 26-Inch	81.902	168.0	0.67	4 5	-0.1 4 0.4 26										
81.865	115.4	0.78	4n	1.2 26-Inch	81.887	167.4	0.76	4n	0.4 26-Inch										
84.334	116.1	0.75	4n	1.2 26-Inch															
86.828	116.0	0.65	4n	1.2 26-Inch															
Knipe, 1960: -2.4, -0.21; -2.3, -0.23; -1.6, -0.24; -1.6, -0.31. Closing in well ahead of the prediction.																			

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

199

I 1455					22 32.0 -42 44	16073	A 1468			22 34.2 +54 05
78.792	148.4	0.10	2 7	+0.5 1	60	81.653	254.9	0.35	2 5	-0.1 3 0.1 26
78.806	131.7	0.10	2 6	+0.3 1	60	81.787	255.1	0.25	2 6	+0.1 4 0.0 26
78.808	141.6	0.10	2 6	+0.5 1	60	81.826	257.8	0.21	2 5	0.0 4 0.0 26
						81.842	254.8	0.23	2 6	0.0 4 0.0 26
78.802	140.6	0.10	3n		60-Inch	81.777	255.6	0.26	4n	0.0 26-Inch
KUI 112 AP					22 32.7 +53 47					
78.839	200.8	0.38	2 6	-0.2 3 0.1 26		16056	HU 389			22 34.2 -18 41
79.797	202.9	0.47	2 7	-0.1 4 0.2 26		78.784	162.3	0.20	2 7	+0.7 1 0.0 36
79.846	204.2	0.51	2 6	0.0 4 0.2 26		78.787	168.1	0.20	2 6	+0.5 1 0.0 36
79.885	198.6	0.53	2 7	0.0 4 0.4 26		78.789	165.5	0.19	2 9	+0.4 1 0.1 36
81.787	204.2	0.51	2 8	0.0 4 0.3 26		84.776	183.8	0.15	2 6	+0.1 3 0.2 60
81.842	210.4	0.48	2 6	0.0 4 0.2 26		84.782	183.2	0.17	2 8	0.0 3 0.2 60
81.864	216.0	0.50	2 6	-0.4 3 0.3 26		84.784	183.4	0.17	2 5	+0.6 3 60
81.867	212.3	0.47	2 6	-0.5 4 0.2 26		78.787	165.8	0.20	3n	0.0 36-Inch
81.897	218.5	0.44	2 7	-0.5 3 0.3 26		84.781	183.5	0.16	3n	0.2 60-Inch
86.808	222.4	0.64	2 7	-0.2 3 26						
86.830	230.9	0.57	2 7	0.0 3 0.2 26		HU 1544				
86.884	229.0	0.51	2 7	0.0 3 0.4 26		22 35.2 -53 37				
Heintz, 1976: -11.1, +0.01; -10.9, -0.05; -12.4, -0.07.						84.773	134.0	0.66	2 5	+0.3 3 0.3 60
						84.776	136.8	0.58	2 5	+0.5 3 0.2 60
						84.790	134.5	0.60	2 7	+0.4 3 0.0 60
16046	HU 1320				22 32.8 +49 23	84.780	135.1	0.61	3n	0.2 60-Inch
77.746	296.2	0.28	2 6	0.0 3 0.0 26						
77.760	296.8	0.26	2 5	0.0 3 0.1 26		16111				
77.763	295.1	0.26	2 4	-0.2 3 0.0 26		BU 1092				
80.659	304.3	0.26	2 7	0.0 4 0.2 26		22 36.1 +72 52				
80.890	303.5	0.30	2 6	0.0 3 0.0 26		86.808	60.4	0.19	2 5	-0.2 3 26
80.892	308.6	0.29	2 4	-0.3 3 26		86.830	59.9	0.26	2 6	0.0 3 0.0 26
80.928	310.9	0.30	2 7	+0.1 4 0.2 26		86.884	59.4	0.19	2 7	0.0 3 0.0 26
82.825	309.5	0.28	2 5	0.0 3 0.0 26		86.841	59.9	0.21	3n	0.0 26-Inch
83.857	302.1	0.27	2 7	-0.1 3 0.2 26		Baize, 1987: +4.7, +0.02.				
83.893	304.4	0.27	2 6	0.0 3 0.2 26		Heintz, 1986: +5.9, -0.03.				
77.756	296.0	0.27	3n	0.0 26-Inch		Docobo, Costa, 1986: +4.5, 0.00.				
80.842	306.8	0.29	4n	0.1 26-Inch						
83.525	305.3	0.27	3n	0.1 26-Inch		16138	HO 295			22 38.8 +44 18
Couteau, 1972: -5.7, -0.01; -1.3, -0.01; -7.9, -0.04.						77.746	155.1	0.25	2 7	0.0 3 0.2 26
16041	BU 381				22 32.9 +33 24	77.760	157.7	0.20	2 5	0.0 3 0.0 26
81.886	230.3	1.52	2 6	-0.4 3 1.3 26		78.839	153.8	0.17	2 6	0.0 3 0.0 26
81.902	231.6	1.54	2 5	0.0 4 1.5 26		78.115	155.5	0.21	3n	0.0 26-Inch
81.960	230.0	1.45	2 6	+0.2 3 1.2 26		Harris, 1947: +2.2, +0.02.				
81.916	230.4	1.50	3n	1.3 26-Inch		Cester, 1962: -2.7, +0.02.				
16057	STF 2924				22 33.0 +69 54					
79.852	90.0	0.47	2 5	0.0 3 0.3 26		16139	HU 392			22 39.0 +18 50
79.885	88.4	0.44	2 7	0.0 4 0.4 26		79.915	353.8	0.44	2 5	-0.2 3 0.1 26
79.887	91.2	0.53	2 4	+0.1 3 0.5 26		79.923	348.5	0.49	2 7	0.0 4 0.1 26
79.890	90.8	0.38	2 7	0.0 3 0.4 26		79.945	352.1	0.53	2 5	+0.2 3 0.3 26
79.878	90.1	0.46	4n	0.4 26-Inch		79.928	351.5	0.49	3n	0.2 26-Inch
Heintz, 1956: +3.9, -0.08.										

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

16144	STF 2929	22 39.3 +10 33		16173	HO 296	22 40.8 +14 32	
86.824	359.9	1.99	1 6 -0.1 3 0.2 26	79.797	16.5	0.27	1 7 +0.1 4 1.0 26
86.830	358.0	2.06	1 7 +0.1 3 0.0 26	79.846	22.3	0.31	2 7 +0.2 4 0.7 26
86.849	358.7	2.21	1 6 0.0 3 0.4 26	79.852	22.4	0.30	3 5 0.0 3 0.7 26
86.928	359.7	2.10	1 5 -0.2 3 26	79.885	19.9	0.28	2 7 +0.3 4 0.8 26
86.858	359.1	2.09	4n 0.2 26-Inch	79.845	20.3	0.29	4n 0.8 26-Inch
16142	HU 393	22 39.1 +20 13		Heintz, 1985: -2.7, 0.00.			
79.915	238.5	0.92	4 5 -0.1 3 1.7 26	KUI 114	22 40.8 -03 33		
79.923	235.5	0.92	2 6 0.0 3 2.0 26	84.782	120.9	0.15	2 6 +0.2 3 60
79.945	237.0	0.88	2 5 +0.3 3 2.4 26	84.787	124.1	0.17	2 5 0.0 3 0.5 60
79.928	237.0	0.91	3n 2.0 26-Inch	84.790	120.4	0.17	2 7 +0.4 3 0.7 60
16157	A 2099	22 40.0 +01 12		84.793	124.0	0.15	2 7 0.0 3 0.2 60
79.797	158.1	0.55	1 7 +0.1 4 1.0 26	84.788	122.4	0.16	4n 0.5 60-Inch
79.846	157.8	0.54	4 7 +0.3 4 1.0 26	Baize, 1976: -1.6, 0.00.			
79.885	159.6	0.56	4 7 +0.2 4 0.6 26	16185	STF 2934	22 41.8 +21 25	
79.915	154.0	0.49	2 5 -0.2 3 1.0 26	77.760	76.0	1.03	2 5 +0.2 3 1.0 26
86.690	162.8	0.58	1 7 0.0 3 0.7 26	77.763	81.4	1.10	2 4 -0.2 3 0.8 26
86.767	163.0	0.63	1 6 0.0 3 0.6 26	77.946	76.7	0.89	2 5 +0.2 3 1.2 26
86.808	162.4	0.66	2 6 0.0 3 0.7 26	78.839	73.5	0.99	2 5 +0.2 3 0.7 26
86.824	162.6	0.68	1 5 0.0 3 0.6 26	81.886	70.0	1.13	2 5 0.0 3 0.9 26
79.861	157.4	0.54	4n 0.9 26-Inch	81.902	75.6	1.09	2 5 -0.1 4 0.8 26
86.772	162.7	0.64	4n 0.6 26-Inch	81.960	73.9	1.14	2 5 0.0 3 0.8 26
Baize, 1983: -2.1, +0.03; +0.2, +0.06.				82.825	74.3	1.04	2 5 -0.1 3 0.6 26
16164	HO 188	22 40.2 +37 31		84.716	71.2	1.09	2 5 0.0 3 0.8 26
77.689	192.7	0.28	2 6 +0.2 3 0.0 26	84.946	70.0	0.99	2 6 -0.1 3 1.2 26
77.746	195.2	0.29	2 5 +0.2 3 0.0 26	85.589	67.8	0.98	2 5 -0.1 3 0.7 26
77.760	194.5	0.30	2 5 +0.1 3 0.0 26	78.077	76.9	1.04	3n 0.9 26-Inch
86.884	202.5	0.36	2 7 0.0 3 0.4 26	82.138	73.4	1.10	4n 0.8 26-Inch
86.928	203.0	0.32	2 5 -0.1 3 26	85.084	69.7	1.02	3n 0.9 26-Inch
77.732	194.1	0.29	3n 0.0 26-Inch	Heintz, 1981: +1.1, 0.00; +0.9, +0.04; -1.1, -0.06.			
86.906	202.8	0.34	2n 0.4 26-Inch	B 574	22 42.1 -37 09		
Popovic, 1976: -1.5, +0.02.				78.792	288.9	0.83	2 7 +0.4 1 0.5 60
Costa, Docobo, 1986: +0.1, -0.01.				78.800	287.5	0.85	2 4 +0.1 1 0.7 60
16160	HU 288	22 40.2 -15 58		78.796	288.2	0.84	2n 0.6 60-Inch
78.784	60.2	0.30	2 7 +0.5 1 0.0 36	16199	BU 710	22 42.6 +29 42	
78.787	65.1	0.30	2 7 +0.5 2 0.0 36	79.915	252.5	0.41	2 5 0.0 3 0.1 26
78.789	62.6	0.32	2 9 +0.4 1 0.1 36	79.923	249.0	0.46	2 6 +0.1 4 0.1 26
78.787	62.6	0.31	3n 0.0 36-Inch	79.956	246.8	0.43	2 7 +0.1 3 0.3 26
16165	HU 494	22 40.5 +06 31		79.931	249.4	0.43	3n 0.2 26-Inch
77.746	129.9	0.31	2 5 +0.3 3 0.0 26	16205	HU 395	22 42.8 +23 47	
78.839	132.7	0.35	2 5 +0.2 3 0.2 26	79.915	87.8	0.51	2 5 0.0 3 0.2 26
78.948	135.5	0.31	2 5 +0.2 3 26	79.923	90.6	0.59	2 6 +0.1 4 0.2 26
78.511	132.7	0.32	3n 0.1 26-Inch	79.956	90.6	0.50	2 7 +0.2 3 0.2 26
Couteau, 1975: -11.4, +0.02.				79.931	89.7	0.53	3n 0.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

201

16215	HU 289	22 43.5 -16 09		16273	HU 985	22 47.9 +12 59	
84.795	281.9	1.34	2 7 +0.4 4 0.1 36	84.713	151.3	0.71	2 5 +0.4 3 1.0 26
84.798	281.8	1.40	2 8 +0.2 4 0.2 36	84.946	161.6	0.54	2 6 0.0 3 1.5 26
84.801	281.8	1.34	2 6 +0.3 4 0.2 36	85.589	156.7	0.62	2 5 -0.1 3 1.0 26
84.798	281.8	1.36	3n 0.2 36-Inch	86.808	157.3	0.63	2 6 0.0 3 1.2 26
	RST 5487	22 44.2 -00 58		85.514	156.7	0.62	4n 1.2 26-Inch
78.784	241.1	0.22	2 7 +0.3 1 0.0 36	16278	BU 1146	22 48.5 +31 06	
78.787	244.2	0.22	2 6 +0.2 1 0.0 36	79.890	108.2	0.20	2 6 0.0 3 1.0 26
78.789	243.4	0.22	2 9 0.0 1 0.0 36	79.923	106.4	0.18	2 6 +0.1 4 1.0 26
78.787	242.9	0.22	3n 0.0 36-Inch	79.956	105.4	0.17	2 7 -0.3 3 1.0 26
16244	A 1474	22 45.1 +54 59		79.923	106.7	0.18	3n 1.0 26-Inch
81.886	183.3	0.47	2 5 -0.3 3 0.5 26	Morel, 1970: -4.9, 0.00.			
81.897	183.3	0.40	2 7 -0.7 3 0.1 26		RST 4112	22 49.1 -15 41	
81.902	187.3	0.40	2 5 0.0 4 0.2 26	84.787	107.5	0.65	2 6 +0.5 3 0.5 60
81.895	184.6	0.42	3n 0.3 26-Inch	84.790	108.4	0.59	2 7 +0.5 3 0.4 60
16235	A 2696 BC	22 45.1 -02 39		84.793	107.0	0.66	2 7 +0.1 3 0.6 60
78.784	109.9	0.45	2 6 +0.4 1 0.8 36	84.790	107.6	0.63	3n 0.5 60-Inch
78.787	105.1	0.44	2 6 +0.3 1 0.6 36	16287	HO 190	22 49.4 +28 01	
78.789	105.1	0.46	2 9 +0.1 1 0.6 36	79.915	156.3	2.23	2 5 0.0 3 0.0 26
78.787	106.7	0.45	3n 0.7 36-Inch	81.842	154.5	2.31	2 6 0.0 4 0.1 26
Reintz, 1973: +1.8, -0.04.				81.864	157.0	2.23	2 5 -0.1 3 0.2 26
16249	HU 783	22 45.3 +51 29		81.207	155.9	2.26	3n 0.1 26-Inch
80.659	179.3	0.18	2 7 -0.1 4 26		FIN 298	22 49.5 57 42	
80.890	185.3	0.22	2 6 -0.1 3 26	78.770	39.5	1.70	2 5 +0.1 1 0.3 36
80.928	172.4	0.22	2 6 +0.1 4 0.0 26	78.773	37.0	1.59	4 5 +0.3 1 0.2 36
80.826	179.0	0.21	3n 0.0 26-Inch	78.781	40.7	1.52	2 6 +0.6 1 0.3 36
16263	HU 984	22 46.3 +66 16		78.775	39.1	1.60	3n 0.3 36-Inch
81.787	12.1	0.83	2 7 0.0 4 0.4 26		HDO 301	22 50.0 -32 48	
81.826	11.6	0.71	2 5 0.0 4 0.3 26	78.792	104.5	0.20	2 7 +0.7 1 0.2 60
81.842	11.5	0.68	2 4 -0.2 4 0.6 26	78.800	104.4	0.22	2 4 +0.1 1 0.2 60
81.818	11.7	0.74	3n 0.4 26-Inch	78.803	104.9	0.21	2 6 +0.3 1 0.2 60
	B 2059	22 47.8 -57 05		84.773	53.3	0.20	2 6 +0.1 3 0.0 60
78.808	75.8	0.17	2 7 +0.3 1 0.1 60	84.776	54.2	0.18	2 5 +0.4 3 60
78.808	75.8	0.17	1n 0.1 60-Inch	84.784	50.5	0.20	2 5 +0.5 3 0.2 60
16272	HO 297	22 47.9 +26 52		84.793	52.9	0.17	2 7 0.0 3 0.0 60
86.824	131.9	6.91	2 6 0.0 3 0.0 26	78.798	104.6	0.21	3n 0.2 60-Inch
86.849	131.8	6.99	2 6 0.0 3 0.5 26	84.781	52.7	0.19	4n 0.0 60-Inch
86.884	131.9	6.90	2 6 0.0 3 0.3 26	Finsen, 1964: -2.0, -0.06; -9.8, -0.01.			
86.852	131.9	6.93	3n 0.3 26-Inch	16310	BU 1332	22 50.9 +53 03	
Clearly optical.				80.890	128.8	1.66	2 6 -0.2 3 0.2 26
				80.892	130.7	1.73	2 3 -0.5 3 0.3 26
				80.928	131.2	1.60	2 6 +0.2 4 0.2 26
				80.903	130.2	1.66	3n 0.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

16314	HO 482	22 51.4 +26 24	16345	BU 382	22 53.7 +44 45
79.718	38.4 0.30	2 6 0.0 3 0.0 26	79.915	209.4 1.03	2 6 0.0 3 1.8 26
79.797	38.6 0.28	1 8 0.0 4 0.2 26	79.945	208.5 1.09	2 5 0.0 3 1.5 26
79.846	41.7 0.33	2 8 +0.1 4 0.2 26	79.956	204.4 1.00	2 7 -0.4 3 1.5 26
79.852	41.7 0.38	2 5 0.0 3 0.0 26	81.653	211.6 1.00	2 5 0.0 3 1.5 26
80.659	36.3 0.31	2 7 +0.1 4 0.1 26	81.787	205.0 0.91	2 7 0.0 4 1.8 26
80.890	36.2 0.34	2 6 -0.1 3 0.2 26	81.826	206.1 1.05	2 5 -0.1 4 1.6 26
80.928	33.8 0.31	2 6 +0.3 4 0.3 26	81.842	208.8 0.97	2 6 -0.2 4 1.8 26
84.946	24.5 0.29	2 6 0.0 3 0.2 26	79.939	207.4 1.04	3n 1.6 26-Inch
84.962	32.3 0.34	2 5 0.0 3 0.3 26	81.777	207.9 0.98	4r 1.7 26-Inch
85.889	29.7 0.29	2 6 -0.1 3 0.3 26	Muller, 1954: +2.1, +0.08; +0.8, +0.02.		
86.767	29.8 0.44	2 7 -0.2 3 26	Rabe, 1961: +0.5, +0.03; -0.6, -0.04.		
79.803	40.1 0.32	4n 0.1 26-Inch	16355	A 190	22 54.3 +47 23
80.826	35.4 0.32	3n 0.2 26-Inch	81.787	222.9 0.31	2 7 0.0 4 0.4 26
85.566	29.1 0.34	4n 0.3 26-Inch	81.826	207.4 0.29	2 5 -0.1 4 26
Morel, 1970: +0.6, -0.02; -2.8, -0.02; -3.8, -0.03.			81.897	234.2 0.31	2 6 0.0 3 26
	COU 239	22 51.9 +22 19	81.960	233.6 0.25	2 5 0.0 3 26
86.824	294.9 2.00	2 6 0.0 3 0.3 26	81.868	224.6 0.29	4n 0.4 26-Inch
86.830	297.5 2.01	2 7 0.0 3 0.2 26	16366	BU 712	22 54.9 +59 14
86.849	300.3 2.07	2 6 0.0 3 0.3 26	76.925	298.0 1.29	2 5 0.0 3 0.2 26
86.834	297.6 2.03	3n 0.3 26-Inch	77.689	294.4 1.29	2 6 +0.1 3 0.2 26
	I 683	22 51.9 -46 46	78.948	297.4 1.42	2 5 0.0 3 0.4 26
78.770	337.4 1.83	2 5 0.0 1 0.2 36	77.854	296.6 1.33	3n 0.3 26-Inch
78.773	337.1 1.97	2 5 +0.3 1 0.2 36		I 1460	22 55.0 -40 56
78.781	336.8 1.83	2 5 +0.6 1 0.2 36	84.773	20.0 0.24	2 7 +0.2 3 0.0 60
78.775	337.1 1.88	3n 0.2 36-Inch	84.776	15.2 0.20	2 5 +0.4 3 60
			84.784	14.0 0.18	2 5 +0.5 3 0.0 60
16326	A 632	22 52.1 +57 44	84.778	16.4 0.21	3n 0.0 60-Inch
79.852	174.3 1.01	2 6 0.0 3 0.8 26	16362	A 1234	22 55.1 -01 02
79.885	174.4 1.06	2 7 -0.1 4 0.4 26	79.890	63.5 1.00	2 6 0.0 3 0.6 26
79.887	173.4 1.01	2 4 0.0 3 0.6 26	79.915	65.9 1.04	2 5 0.0 3 0.8 26
79.890	173.5 0.98	2 7 -0.2 3 0.4 26	79.923	65.1 1.03	2 6 +0.2 4 0.8 26
79.878	173.9 1.02	4n 0.4 26-Inch	79.909	64.8 1.02	3n 0.7 26-Inch
Baize, 1983: +2.7, +0.07.				I 22	22 55.3 -48 28
	COU 541	22 53.1 +29 26	84.773	172.4 0.53	2 6 +0.3 3 0.2 60
84.946	69.8 1.21	2 7 0.0 3 0.6 26	84.776	172.0 0.57	2 4 +0.5 3 60
86.690	71.2 1.46	2 6 0.0 3 0.8 26	84.784	173.8 0.51	2 6 +0.6 3 0.0 60
86.767	68.0 1.43	2 7 -0.1 3 0.6 26	84.778	172.7 0.54	3n 0.1 60-Inch
86.134	69.7 1.37	3n 0.7 26-Inch	16373	HU 987	22 55.7 +15 47
	B 2505	22 53.2 -37 59	79.890	103.3 0.82	2 6 0.0 3 0.3 26
78.800	175.3 3.11	4 4 0.0 1 0.4 60	79.915	102.9 0.85	2 5 +0.1 3 0.3 26
78.806	175.2 3.09	2 7 +0.2 1 0.3 60	79.923	103.2 0.86	2 6 +0.1 4 0.3 26
78.808	175.0 3.04	2 7 +0.3 1 0.3 60	79.909	103.1 0.84	3n 0.3 26-Inch
78.805	175.2 3.08	3n 0.3 60-Inch	Heintz, 1984: +9.4, +0.07.		

203

16393	STT 484		22 56.2 +72 50	16449	STF 2969		23 01.0 +26 46
79.718	113.9	0.35	2 5 0.0 3 0.4 26	86.849	35.7	3.86	2 5 0.0 3 1.8 26
79.797	113.2	0.38	2 8 0.0 4 0.7 26	86.884	35.0	3.86	2 8 -0.1 3 1.2 26
79.846	116.6	0.38	2 5 +0.1 4 0.7 26	86.928	34.3	3.94	2 5 -0.3 3 1.5 26
79.852	114.1	0.38	2 5 +0.1 3 0.6 26				
79.803	114.4	0.37	4n 0.6 26-Inch	86.887	35.0	3.89	3n 1.5 26-Inch
Muller, 1955: +5.2, -0.02.				16469	STF 487		23 01.2 +80 46
16379	STF 2957		22 56.3 +17 28	81.787	205.4	0.23	2 5 0.0 4 26
86.690	225.4	4.37	2 7 0.0 3 0.8 26	83.857	197.8	0.23	1 5 -0.2 3 0.7 26
86.788	227.0	4.55	2 5 0.1 3 1.4 26	82.822	201.6	0.23	2n 0.7 26-Inch
86.808	224.9	4.64	2 6 -0.1 3 1.1 26				
86.762	225.8	4.52	3n 1.1 26-Inch	16459	HU 993		23 01.6 +67 46
	COU 240		22 56.4 +22 57	79.718	217.8	2.01	2 5 0.0 3 2.0 26
79.890	292.1	0.66	2 6 +0.1 3 0.4 26	79.797	217.2	2.00	2 8 0.0 4 1.4 26
79.915	291.7	0.76	2 5 +0.1 3 0.4 26	79.852	215.9	2.10	3 5 0.0 3 1.8 26
79.923	292.2	0.74	2 6 +0.2 4 0.5 26	79.789	217.0	2.04	3n 1.7 26-Inch
79.909	292.0	0.72	3n 0.4 26-Inch				
16404	HU 990		22 57.6 +62 22	16463	HU 398		23 02.3 +18 36
76.917	287.3	1.04	2 5 0.0 3 1.0 26	77.746	255.0	0.23	2 7 0.0 3 0.0 26
77.689	286.1	1.02	2 5 +0.2 3 1.8 26	77.946	250.8	0.22	2 5 +0.1 3 0.2 26
78.948	289.9	0.97	2 5 +0.1 3 1.7 26	78.839	247.6	0.25	2 5 0.0 3 0.3 26
77.851	287.8	1.01	3n 1.5 26-Inch	82.825	256.7	0.26	2 5 +0.1 3 0.3 26
16414	A 1236		22 58.5 +00 01	83.857	267.3	0.28	2 6 +0.1 3 0.2 26
76.728	353.5	0.75	1 6 0.0 4 0.3 26	83.893	265.8	0.32	2 5 0.0 3 0.3 26
80.890	354.6	0.75	1 6 -0.1 3 0.8 26	86.690	267.3	0.35	2 7 0.0 3 0.3 26
78.809	354.0	0.75	2n 0.6 26-Inch	86.767	267.6	0.35	2 6 -0.1 3 0.3 26
	HU 1335		22 58.6 45 31	86.808	256.3	0.36	2 6 -0.1 3 0.2 26
78.775	42.6	0.21	2 5 +0.3 1 36	86.824	261.0	0.37	2 7 +0.1 3 0.3 26
78.773	44.3	0.24	2 6 +0.3 1 36	86.830	259.1	0.35	2 7 +0.1 3 0.3 26
78.781	43.7	0.21	2 5 +0.6 1 36	78.177	251.1	0.23	3n 0.2 26-Inch
84.784	74.0	0.35	2 6 +0.6 3 0.3 60	83.525	263.3	0.29	3n 0.3 26-Inch
84.787	78.2	0.31	2 6 +0.7 3 0.2 60	86.784	262.3	0.36	5n 0.3 26-Inch
84.790	73.2	0.34	2 8 +0.8 3 0.4 60	S. Jankova, 1985: +7.6, -0.04; +5.8, 0.02; -2.2, +0.03.			
84.793	71.0	0.40	2 8 +0.1 3 0.2 60		DON 10-0		23 02.3 -42 58
78.775	43.5	0.22	3n 36-Inch	84.793	271.5	3.20	2 8 +0.1 3 0.8 60
84.788	74.1	0.35	4n 0.3 60-Inch	84.793	271.5	3.20	1n 0.8 60-Inch
Heintz, 1984: -1.1, 0.00; +2.1, -0.05.				16465	BU 384		23 02.6 -18 33
16428	STT 483		22 59.2 +11 44	84.795	62.6	1.08	2 6 +0.2 4 2.0 36
80.659	299.3	0.60	2 7 0.0 4 1.2 26	84.798	62.4	1.20	2 7 0.0 4 2.0 36
80.890	299.2	0.68	2 6 0.0 3 0.8 26	84.801	61.8	1.06	2 7 +0.1 4 2.2 36
80.928	300.7	0.72	2 6 +0.3 4 0.8 26	84.798	62.3	1.11	3n 2.1 36-Inch
80.944	299.3	0.54	2 4 0.0 3 0.8 26				
80.855	299.6	0.64	4n 0.9 26-Inch		COU 142		23 03.9 +25 12
Valbousquet, 1981: +4.4, -0.06.				86.808	16.0	0.57	2 6 -0.1 3 26
Guntzel-Lingner, 1956: -2.6, -0.04.				86.824	16.6	0.54	2 6 -0.1 3 26
				86.830	19.0	0.49	2 7 0.0 3 26
				86.821	17.2	0.53	3n 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

COU 143			23 04.8 +23 53			16530	HU 994			23 07.9 +03 38		
86.824	56.4	0.60	2 6	0.0	3 0.6 26	77.760	119.9	0.17	2 5	-0.1	3 0.2 26	
86.830	56.6	0.48	2 6	0.0	3 0.8 26	79.718	130.2	0.20	2 5	0.0	3 0.0 26	
86.884	47.1	0.51	2 7	0.0	3 0.3 26	79.797	126.6	0.24	2 7	0.0	4 0.0 26	
						79.846	124.0	0.20	2 7	0.0	4 0.2 26	
86.846	53.4	0.53	3n	0.6	26-Inch							
No motion in 20 years.												
RST 4118			23 04.8 -15 44			16529	A 1899			23 08.2 +05 02		
78.800	193.5	2.63	1 4	0.0	1 2.8 60	79.887	73.2	1.75	2 7	+0.1	4 4.4 26	
78.803	196.5	2.35	1 5	+0.4	1 3.5 60	79.890	70.5	1.74	2 5	0.0	3 4.0 26	
78.808	193.3	2.45	2 5	+0.7	1 3.2 60	79.956	64.1	1.56	2 7	+0.1	3 3.4 26	
78.804	194.4	2.48	3n	3.2	60-Inch	79.911	69.3	1.68	3n	3.9	26-Inch	
16497 A 417			23 05.2 -07 42			16531	HO 196			23 08.3 +30 27		
84.773	2.6	0.17	1 7	+0.2	3 0.0 60	83.857	296.6	1.78	2 5	+0.1	3 1.6 26	
84.782	357.3	0.13	2 6	-0.1	3 0.0 60	83.893	296.8	1.85	2 5	0.0	3 1.7 26	
84.787	359.5	0.16	2 6	+0.3	3 0.0 60	84.946	296.5	1.97	2 7	0.0	3 2.0 26	
						84.962	298.0	1.67	2 5	0.0	3 1.6 26	
84.781	359.8	0.15	3n	0.0	60-Inch	84.414	297.0	1.82	4n	1.7	26-Inch	
Hirst, 1944: +8.8, +0.02. The Aitken orbit (1932) gives worse residuals.												
B 1898			23 05.2 -18 22			16537	HU 995			23 08.7 +15 32		
78.784	294.1	0.20	2 6	+0.3	1 0.0 36	81.653	193.9	1.10	4 5	-0.1	3 0.8 26	
78.789	294.6	0.19	2 8	+0.3	1 0.1 36	81.826	194.4	0.98	2 5	-0.1	4 0.8 26	
78.786	294.4	0.20	2n	0.0	36-Inch	81.842	192.3	1.04	2 6	-0.1	4 0.7 26	
						81.774	193.5	1.04	3n	0.8	26-Inch	
16516 HO 194			23 06.1 +41 47			16539	A 1238			23 08.8 +10 57		
79.956	58.4	0.40	2 7	+0.1	3 1.3 26	80.659	218.1	0.23	2 7	+0.1	4 0.5 26	
81.864	61.2	0.43	2 5	-0.1	3 1.5 26	80.890	218.0	0.20	2 6	0.0	3 0.0 26	
81.897	70.5	0.39	2 5	0.0	3 1.8 26	80.928	210.0	0.23	2 6	+0.2	3 0.5 26	
83.857	70.6	0.36	2 6	0.0	3 1.4 26	80.826	215.4	0.22	3n	0.3	26-Inch	
81.894	65.2	0.40	4n	1.5	26-Inch	Muller, 1955: +3.5, -0.02.						
16514 STF 2977			23 06.5 +61 26			RST 3320			23 09.9 -22 27			
79.887	354.3	2.05	2 5	-0.2	3 3.5 26	78.803	333.4	0.24	1 6	+0.4	1 0.6 60	
79.945	355.9	1.97	2 5	+0.2	3 2.8 26	78.806	329.0	0.24	2 5	+0.1	1 0.6 60	
79.956	352.0	1.85	2 6	0.0	3 2.4 26	78.808	329.8	0.28	1 5	+0.7	1 0.8 60	
79.929	354.1	1.96	3n	2.9	26-Inch	84.795	311.1	0.22	2 7	+0.3	4 0.5 36	
						84.798	319.9	0.26	2 7	0.0	4 0.6 36	
						84.801	313.2	0.27	2 7	+0.1	4 0.6 36	
16538 STF 489			23 07.9 +75 23			78.806	330.7	0.25	3n	0.7	60-Inch	
81.787	323.3	1.11	2 5	0.0	4 2.4 26	84.798	314.7	0.25	3n	0.6	36-Inch	
81.897	321.8	1.03	2 5	0.0	3 1.4 26							
81.960	323.7	0.98	2 5	-0.1	3 2.0 26							
81.881	322.9	1.04	3n	1.9	26-Inch							
Muller, 1952: -13.9, +0.04.												
16561 BU 385			23 10.3 +32 29			81.653	93.3	0.67	2 5	0.0	3 0.6 26	
						81.864	94.8	0.55	2 5	-0.1	3 0.8 26	
						81.886	93.0	0.62	2 4	-0.1	3 0.7 26	
						85.967	92.6	0.65	2 5	0.0	3 0.7 26	
						82.842	93.4	0.62	4n	0.7	26-Inch	

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

205

16576	HD 197	23 11.4 +38 13
79.890	326.3 0.25	2 6 0.0 3 0.3 26
79.915	318.4 0.26	2 6 +0.1 3 0.3 26
79.923	322.9 0.25	2 6 +0.1 4 0.3 26
79.909	322.5 0.25	3n 0.3 26-Inch

Costa, Morales, 1978: +2.9, 0.00.

	I 1466	23 11.8 -44 43
78.770	198.9 0.84	2 4 +0.2 1 0.4 36
78.773	191.3 0.69	2 6 +0.4 1 0.6 36
78.781	193.2 0.70	2 5 +0.5 1 0.6 36
78.775	194.5 0.74	3n 0.5 36-Inch

16591	A 2298	23 12.6 +02 42
78.803	97.5 0.14	2 6 +0.5 1 0.1 60
78.806	99.0 0.15	2 5 0.0 1 0.0 60
78.808	97.8 0.16	2 6 +0.1 1 0.0 60
84.773	284.1 0.17	2 6 +0.2 3 60
84.782	276.0 0.11	2 6 -0.1 3 60
84.787	288.5 0.14	2 6 +0.3 3 0.0 60
84.790	283.3 0.15	2 6 +0.2 3 0.0 60
86.824	281.1 0.15	2 7 0.0 3 26
86.884	280.3 0.18	2 7 -0.1 3 26
78.806	98.1 0.15	3n 0.0 60-Inch
84.783	283.0 0.14	4n 0.0 60-Inch
86.854	280.7 0.16	2n 26-Inch

Costa, Docobo, 1983: -4.5, 0.00;
-14.0, 0.00;
-8.4, +0.01.
Increased deviations near periastron.

	HU 1644	23 12.7 -61 48
78.770	331.1 0.71	2 4 +0.4 1 0.2 36
78.773	335.6 0.53	2 5 +0.4 1 0.1 36
78.781	329.7 0.60	2 5 +0.6 1 0.1 36
78.775	332.1 0.61	3n 0.1 36-Inch

16592	HLD 170	23 12.8 -21 56
84.776	310.7 1.09	2 4 +0.6 3 1.4 60
84.784	310.2 1.04	2 6 +0.7 3 1.2 60
84.787	310.6 0.99	2 6 +0.4 3 1.2 60
84.782	310.5 1.04	3n 1.3 60-Inch

16604	A 418	23 13.5 -08 54
78.789	36.3 0.61	1 9 +0.2 1 0.8 36
78.808	34.4 0.78	2 5 +0.2 1 1.3 60
78.789	36.3 0.61	1n 0.8 36-Inch
78.808	34.4 0.78	1n 1.3 60-Inch

16607	A 2299 BC	23 13.6 +02 13
84.946	70.0 1.16	2 6 -0.1 3 0.4 26
84.952	75.0 1.06	2 5 -0.1 3 0.6 26
85.967	73.7 1.20	2 5 +0.1 3 0.3 26
86.690	74.3 1.20	2 7 0.0 3 0.5 26
85.641	73.2 1.16	4n 0.5 26-Inch

16621	A 200	23 14.6 +41 16
76.746	86.9 0.48	2 6 0.0 3 0.7 26
78.932	85.7 0.37	2 4 0.0 3 0.7 26
78.948	86.6 0.34	2 5 -0.1 3 0.6 26
78.209	86.4 0.40	3n 0.7 26-Inch

16651	D00 21	23 15.2 +60 27
84.946	127.4 1.31	2 6 0.0 3 0.2 26
84.947	132.3 1.24	2 5 0.0 3 0.5 26
86.690	127.4 1.30	2 7 0.0 3 0.2 26
85.533	129.0 1.28	3n 0.3 26-Inch

	SEE 480	23 15.4 -35 42
84.776	283.1 0.94	2 5 +0.3 3 0.2 60
84.781	282.2 0.86	2 7 +0.6 3 0.1 60
84.790	285.2 0.89	2 8 +0.4 3 0.2 60
84.787	283.5 0.90	3n 0.2 60-Inch

16633	BU 1220 BC	23 15.8 -09 05
79.885	282.3 0.31	2 7 0.0 4 0.1 26
79.956	272.7 0.30	2 7 +0.1 3 0.2 26
80.890	280.2 0.29	2 6 +0.1 3 26
80.928	284.1 0.31	2 6 +0.2 4 26
84.793	280.6 0.35	2 8 +0.1 3 0.2 60
84.795	275.0 0.31	2 6 +0.3 4 0.0 36
84.798	278.4 0.40	2 8 0.0 4 0.2 36
84.801	285.5 0.31	2 6 +0.1 4 36
80.415	279.8 0.30	4n 0.1 26-Inch
84.793	280.6 0.35	1n 0.2 60-Inch
84.798	279.6 0.34	3n 0.0 36-Inch

16641	A 1482	23 16.2 +54 25
79.718	94.2 1.38	2 4 -0.1 3 0.1 26
79.846	95.1 1.30	2 7 0.0 4 0.1 26
79.852	93.4 1.41	2 4 0.0 3 0.1 26
79.887	96.4 1.33	2 5 -0.2 3 0.2 26
79.826	94.8 1.36	4n 0.1 26-Inch

	N20 107	23 16.4 -60 31
78.770	332.9 1.47	2 5 +0.1 1 0.4 36
78.773	334.9 1.44	2 5 +0.4 1 0.2 36
78.781	331.5 1.27	2 5 +0.7 1 0.5 36
78.775	333.1 1.39	3n 0.4 36-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

16644	BU 182		23 17.1 -13 49
78.776	48.9	0.73	2 4 +0.6 1 0.2 36
78.784	48.9	0.72	2 7 +0.2 1 0.2 36
78.787	46.5	0.76	2 5 +0.2 1 0.1 36
78.789	47.7	0.75	2 9 +0.3 1 0.1 36
84.787	49.0	0.76	2 7 +0.6 3 0.2 60
84.790	48.2	0.75	2 6 +0.2 3 0.1 60
84.793	47.5	0.72	2 8 0.0 3 0.1 60
78.784	48.0	0.74	4n 0.2 36-Inch
84.790	48.2	0.74	3n 0.1 60-Inch

Baize, 1961: +2.6, +0.01; +2.8, +0.07.

16650	HU 400		23 17.6 +18 19
86.808	124.9	0.29	2 6 -0.1 3 1.5 26
86.824	119.5	0.30	2 7 0.0 3 1.0 26
86.884	118.4	0.26	2 7 0.0 3 1.5 26
86.839	120.9	0.28	3n 1.3 26-Inch

Heintz, 1962: -3.5, -0.07.

16649	BU 79		23 17.6 -01 31
79.846	22.6	1.46	1 6 0.0 4 1.5 26
79.885	24.3	1.36	2 7 +0.1 4 1.4 26
79.890	23.5	1.52	1 5 0.0 3 2.0 26
79.915	23.4	1.53	1 6 0.0 3 1.6 26
86.830	21.8	1.67	2 6 0.0 3 0.8 26
86.849	22.1	1.52	2 5 -0.2 3 1.5 26
86.884	18.7	1.65	1 6 0.0 3 1.2 26
79.884	23.4	1.47	4n 1.6 26-Inch
86.854	20.9	1.61	3n 1.2 26-Inch

Heintz, 1962: -1.1, -0.04; -0.7, +0.08.

	STI 1165		23 18.1 +60 17
79.718	236.9	6.93	2 5 0.0 3 0.8 26
81.960	237.0	6.80	2 5 0.0 3 1.0 26
80.839	237.0	6.86	2n 0.9 26-Inch

16658	HU 598		23 18.1 -16 21
78.776	125.1	1.42	2 4 +0.7 1 0.3 36
78.784	125.6	1.46	2 7 +0.3 1 0.4 36
78.787	123.9	1.57	2 5 +0.3 1 0.4 36
78.782	124.9	1.48	3n 0.4 36-Inch

16665	BU 80		23 18.9 +05 25
77.689	312.0	0.98	2 4 +0.1 3 1.4 26
77.746	309.0	1.03	2 7 +0.1 3 0.5 26
77.760	309.1	1.03	2 5 0.0 3 1.0 26
77.946	308.4		2 6 +0.2 3 1.0 26
77.995	307.3	1.07	2 5 +0.7 3 1.1 26
79.718	313.5	1.18	2 5 +0.1 3 0.8 26
79.797	312.7	1.07	2 8 -0.1 4 1.1 26
79.846	313.1	1.04	2 7 +0.1 4 0.9 26
79.852	313.8	1.15	2 3 0.0 3 1.0 26
81.864	315.9	0.96	2 4 -0.2 3 1.5 26
81.897	311.1	0.98	2 5 0.0 3 1.2 26
81.902	315.3	0.88	2 4 -0.2 4 1.0 26
81.960	314.3	1.02	2 5 +0.1 3 0.8 26
83.893	319.3	0.79	1 5 +0.1 3 1.3 26
84.713	317.3	0.86	2 4 0.0 3 1.2 26
84.716	317.8	0.83	2 4 -0.1 3 0.8 26
84.946	319.1	0.80	2 7 0.0 3 0.8 26
86.767	324.0	0.89	2 5 +0.1 3 0.8 26
86.808	322.6	0.80	2 7 -0.1 3 1.0 26
86.824	330.3	0.70	2 7 0.0 3 0.8 26
86.830	325.0	0.83	2 6 0.0 3 0.8 26
77.827	309.2	1.03	4n 1.0 26-Inch
79.803	313.3	1.11	4n 0.9 26-Inch
81.906	314.2	0.96	4n 1.1 26-Inch
84.567	318.4	0.82	4n 1.0 26-Inch
86.807	325.5	0.80	4n 0.8 26-Inch

Couteau, 1984: -0.7, +0.07; +0.6, +0.18;
-1.6, +0.08; -2.0, +0.01;
+0.7, +0.05.

16670	A 2699		23 19.0 -06 43
78.792	300.0	0.91	2 7 +0.1 1 0.8 60
78.803	299.6	0.80	2 5 +0.5 2 0.8 60
78.806	298.2	0.80	2 5 +0.2 1 0.6 60
78.800	299.3	0.84	3n 0.7 60-Inch

	COU 742		23 19.8 +34 45
77.760	29.0	0.25	2 5 0.0 3 0.2 26
77.946	27.6	0.27	2 5 +0.2 3 0.2 26
78.839	29.2	0.27	2 5 0.0 3 26
82.825	27.2	0.26	2 5 0.0 3 0.2 26
83.857	21.8	0.29	2 5 0.0 3 26
83.893	23.6	0.22	2 5 -0.2 3 26
78.182	28.6	0.26	3n 0.2 26-Inch
83.525	24.2	0.26	3n 0.2 26-Inch

16695	A 640		23 21.2 +60 35
79.887	15.0	0.86	2 5 -0.2 3 0.2 26
79.915	18.3	0.91	1 6 +0.1 3 0.2 26
79.945	16.6	1.03	2 5 0.0 3 0.2 26
79.916	16.6	0.93	3n 0.2 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

207

16699	ROE 135	23 21.8 +11 51
77.746	137.8 1.36	1 7 +0.1 3 1.6 26
77.946	136.0	1 5 +0.3 3 2.4 26
79.747	137.6 1.00	2 8 0.0 4 1.8 26
79.956	137.1 1.15	2 7 0.0 3 2.3 26
79.166	137.5 1.17	3n 2.0 26-Inch

16700	HU 95	23 21.8 -12 17
78.792	331.9 0.35	2 6 +0.1 1 0.8 60
78.803	329.4 0.36	1 5 +0.5 1 0.6 60
78.806	330.1 0.40	2 5 0.0 1 0.6 60
84.773	321.4 0.43	2 5 +0.2 3 0.5 60
84.782	321.7 0.35	2 6 -0.1 3 1.0 60
84.784	321.1 0.37	2 5 +0.5 3 1.2 60

78.800	330.5 0.37	3n 0.7 60-Inch
84.780	321.4 0.38	3n 0.9 60-Inch

Couteau, 1963: +11.7, 0.00; +14.5, -0.03.

16708	HU 295	23 22.6 -15 03
78.776	100.7 0.38	2 5 +0.4 1 0.5 36
78.784	102.5 0.38	2 7 +0.3 1 0.5 36
78.787	104.1 0.37	2 5 +0.4 1 0.8 36
84.773	107.3 0.27	2 6 +0.3 3 1.2 60
84.782	111.6 0.29	2 6 0.0 3 0.6 60
84.784	110.6 0.28	2 5 +0.5 3 0.4 60

78.782	102.4 0.38	3n 0.6 36-Inch
84.780	109.8 0.28	3n 0.7 60-Inch

van den Bos, 1953: -1.3, -0.05;
-3.3, -0.01.

16731	STT 495	23 24.1 +57 32
86.690	120.5 0.35	2 7 0.0 3 0.2 26
86.808	118.2 0.35	2 7 -0.1 3 0.2 26
86.824	116.2 0.32	2 7 0.0 3 0.3 26
86.830	117.4 0.28	2 7 0.0 3 0.0 26
86.788	118.1 0.32	4n 0.2 26-Inch

Opening out.

	FIN 289	23 25.6 -55 27
78.781	17.9 1.64	2 4 +0.6 1 3.0 36
78.787	17.3 1.68	1 6 +1.0 1 4.0 36
78.784	17.6 1.66	2n 3.5 36-Inch

16762	ROE 103	23 27.3 +09 26
76.955	128.7 2.27	2 5 -0.1 3 1.2 26
77.689	130.7 2.21	2 4 0.0 3 1.2 26
77.746	129.3 2.26	2 7 0.0 3 0.4 26
77.463	129.6 2.25	3n 26-Inch

16767	STN 59	23 27.8 -26 41
78.776	214.7 1.44	2 4 +0.7 1 0.4 36
78.784	212.9 1.47	2 7 +0.6 1 0.4 36
78.787	214.1 1.58	2 7 +0.4 1 0.4 36
78.782	213.9 1.50	3n 0.4 36-Inch

16792	BU 1149	23 29.7 +58 29
79.797	289.6 0.41	2 7 0.0 4 1.0 26
79.797	289.6 0.41	1n 1.0 26-Inch

I have been unable to relocate this pair.

16791	HU 599	23 29.9 -20 35
78.784	202.2 0.16	2 8 +0.2 1 0.0 36
78.787	204.5 0.18	2 6 +0.4 1 0.0 36
78.789	204.9 0.18	2 9 +0.2 1 0.0 36
84.798	193.0 0.16	2 8 -0.1 4 0.4 36
84.801	198.7 0.16	2 7 0.0 4 0.0 36

78.787	203.9 0.17	3n 0.0 36-Inch
84.800	195.8 0.16	2n 0.2 36-Inch

16795	DA 2 CD	23 30.0 +58 33
86.690	211.7 1.32	2 6 0.0 3 1.6 26
86.808	212.8 1.52	2 6 -0.1 3 1.5 26
86.824	214.2 1.36	2 7 0.0 3 1.5 26
86.830	213.0 1.36	2 6 0.0 3 1.4 26
86.788	212.9 1.39	4n 1.5 26-Inch

16797	HU 999	23 30.1 +13 59
76.955	142.8 1.74	2 5 0.0 3 0.6 26
77.746	141.9 1.62	2 7 +0.1 3 0.5 26
77.760	142.6 1.77	2 5 0.0 3 0.5 26
77.487	142.4 1.71	3n 0.5 26-Inch

16800	BU 1266	23 30.4 +30 50
78.836	96.9 0.20	2 7 +0.2 3 0.0 26
78.839	99.1 0.24	2 5 0.0 3 0.0 26
78.932	99.2 0.24	2 6 -0.2 3 0.0 26
80.659	93.1 0.25	2 7 0.0 4 0.0 26
80.928	95.8 0.23	2 6 0.0 4 0.2 26
81.787	89.4 0.23	2 6 -0.1 4 0.0 26
81.826	90.1 0.25	2 7 -0.1 4 0.0 26
84.713	83.1 0.23	2 5 0.0 3 0.0 26
84.946	82.1 0.22	2 7 -0.2 3 0.0 26
84.962	81.7 0.29	2 5 -0.1 3 0.0 26

78.869	98.4 0.23	3n 0.0 26-Inch
81.300	92.1 0.24	4n 0.0 26-Inch
84.874	82.3 0.25	3n 0.0 26-Inch

Eggen, 1963: -2.1, -0.02; -1.9, -0.02;
-3.1, -0.02.

MICROMETER MEASURES OF 2589 DOUBLE STARS
 TABLE 2 (Cont.)

16807	STT 497		23 30.9 +09 29		16836	BU 720	23 34.0 +31 20
77.760	218.7	1.44	2 5 0.0 3 0.7 26		78.839	78.5	0.47 2 5 +0.1 3 0.1 26
77.946	216.3		2 5 0.0 3 26		78.932	76.7	0.44 2 7 0.0 3 0.0 26
78.836	218.2	1.30	2 6 +0.3 3 0.8 26		78.946	80.7	0.46 2 5 -0.2 3 0.4 26
78.839	214.0	1.40	1 5 0.0 3 0.8 26		84.713	81.3	0.57 2 5 0.0 3 0.0 26
					84.946	84.8	0.52 2 7 0.0 3 0.0 26
78.345	216.8	1.38	3n 0.8 26-Inch		84.962	83.8	0.50 2 5 -0.2 3 0.0 26
					78.906	78.6	0.46 3n 0.2 26-Inch
16819	HU 298		23 32.2 +07 05		84.874	83.3	0.53 3n 0.0 26-Inch
77.760	56.1	0.18	2 5 +0.1 3 0.0 26		Baize, 1976: -0.9, -0.05; -1.4, +0.01.		
77.946	54.5	0.17	2 6 +0.2 3 0.0 26				
78.836	54.7	0.14	2 6 +0.3 3 26				
80.659	78.8	0.15	2 7 0.0 4 26				
80.928	80.6	0.18	2 6 0.0 4 26				
78.180	55.1	0.16	3n 0.0 26-Inch	16850	SEE 492		23 35.7 -27 29
80.794	79.7	0.16	2n 26-Inch	78.806	275.4	0.51	2 6 +0.2 1 1.2 60
				78.808	275.2	0.41	2 5 +0.6 1 1.1 60
Cester, 1963: +3.2, -0.01; -5.7, 0.00.				78.807	275.3	0.46	2n 1.2 60-Inch
Muller, 1955: +7.9, -0.03; +2.8, -0.01.				Costa, Docobo, 1983: +2.4, 0.00.			
				Heintz, 1984: +2.5, +0.01.			
16823	A 1489		23 32.6 +49 49				
76.728	29.0	0.43	1 7 0.0 4 0.4 26				
79.797	33.1	0.46	2 7 0.0 4 0.5 26				
79.846	30.2	0.44	2 6 0.0 4 0.4 26				
78.790	30.8	0.44	3n 0.4 26-Inch				
	RST 4127		23 32.7 -11 20	16858	BU 721		23 36.3 -07 07
78.789	266.5	0.39	2 8 +0.3 1 0.2 36	78.789	138.2	0.25	2 8 +0.4 1 0.1 36
78.792	274.4	0.33	2 7 +0.1 1 0.2 60	78.792	139.5	0.18	2 6 +0.3 1 0.0 60
78.806	267.5	0.40	2 6 0.0 1 0.5 60	78.803	138.4	0.18	2 5 +0.5 1 0.4 60
78.808	268.4	0.28	2 4 +0.4 1 0.6 60				
				78.789	138.2	0.25	1n 0.1 36-Inch
78.789	266.5	0.39	1n 0.2 36-Inch	78.798	139.0	0.18	2n 0.2 60-Inch
78.802	270.1	0.34	3n 0.4 60-Inch				
	VOU 28 BC		23 32.7 -16 45	16866	ES 401		23 36.8 +30 45
78.789	177.9	0.50	1 8 +0.3 1 0.3 36	78.932	68.6	2.63	2 7 0.0 3 2.0 26
78.792	178.0	0.58	2 6 +0.2 1 0.2 60	79.885	68.3	2.46	2 7 -0.1 4 2.8 26
78.806	179.0	0.52	1 6 +0.1 1 0.3 60	79.956	67.1	2.46	2 7 -0.1 3 3.0 26
84.793	174.6	0.20	2 7 -0.1 3 60				
84.795	170.4	0.25	2 5 +0.2 4 36	79.591	68.0	2.52	3n 2.6 26-Inch
84.798	167.1	0.22	2 8 0.0 4 0.3 36				
84.801	168.1	0.18	2 7 +0.1 4 36				
78.789	177.9	0.50	1n 0.3 36-Inch				
78.799	178.5	0.55	2n 0.2 60-Inch				
84.793	174.6	0.20	1n 60-Inch				
84.798	168.5	0.22	3n 0.3 36-Inch				
Heintz, 1986: -0.3, -0.06; +0.3, 0.00;							
-1.6, +0.01; -7.6, +0.03.							
This pair is in rapid motion in a highly-inclined orbit.							
	COO 258		23 33.5 -57 02	16873	FOX 102		23 37.4 +07 37
78.770	194.9	1.97	1 5 +0.2 1 0.5 36	79.718	286.7	0.23	2 5 0.0 3 26
78.773	194.1	1.77	1 5 +0.4 1 0.5 36	79.797	288.9		2 7 +0.1 4 0.0 26
78.781	194.5	1.85	2 4 +0.6 1 0.4 36	79.846	288.6	0.26	2 7 +0.4 4 0.0 26
				79.885	293.2	0.24	2 6 0.0 4 0.3 26
				79.890	293.8	0.20	2 5 -0.2 3 26
78.775	104.5	1.86	3n 0.5 36-Inch	86.690	312.9	0.29	2 6 +0.1 3 26
				86.808	306.4	0.23	2 7 -0.1 3 0.0 26
				86.824	310.9	0.24	2 6 0.0 3 0.0 26
				86.884	307.9	0.17	2 8 0.0 3 26
				79.835	290.6	0.23	4n 0.1 26-Inch
				86.802	309.5	0.23	4n 0.0 26-Inch
				Popovic, 1973: +2.7, -0.07; +8.0, -0.07.			

TABLE 2 (Cont.)

16877	STT 500		23 37.5 +44 26		BU 1550		23 41.5 -41 36
80.659	359.9	0.45	2 7 0.0 4 1.2 26	78.784	10.7	0.81	2 7 +0.5 1 0.3 36
80.928	358.4	0.60	2 5 +0.1 4 0.8 26	78.787	14.0	0.75	2 6 +0.6 1 0.4 36
80.944	359.1	0.51	2 4 -0.5 3 0.8 26	78.789	12.5	0.75	2 6 +0.5 1 0.2 36
80.963	1.4	0.65	2 4 -0.6 3 26				
86.690	1.4	0.61	2 6 0.0 3 0.5 26	78.784	12.4	0.78	3n 0.3 36-Inch
86.767	1.0	0.61	2 5 -0.1 3 0.5 26				
86.808	359.5	0.59	2 6 -0.1 3 0.3 26				
86.824	0.4	0.50	2 7 0.0 3 0.2 26	16942	STT 504		23 42.6 +18 40
80.874	359.7	0.55	4n 0.9 26-Inch	84.713	177.4	7.89	2 5 -0.1 3 3.5 26
86.772	0.6	0.58	4n 0.4 26-Inch	84.946	174.8	7.63	1 7 0.0 3 2.5 26
				84.962	174.6	7.63	2 5 -0.1 3 2.5 26
Zulevic, 1981: +1.2, +0.04; -0.7, +0.09.				84.874	175.6	7.72	3n 2.8 26-Inch
	DON 1051		23 37.6 -20 31	16951	A 1242		23 43.1 +11 50
84.790	204.6	0.77	2 8 +0.4 3 0.8 60	78.932	324.7	0.93	2 7 0.0 3 0.2 26
84.793	205.9	0.78	2 8 0.0 3 0.8 60	78.948	328.3	0.89	2 5 -0.3 3 0.2 26
				79.718	324.7	0.91	2 5 -0.1 3 0.1 26
84.792	205.2	0.78	2n 0.8 60-Inch	79.199	325.9	0.91	3n 0.2 26-Inch
	FIN 291		23 38.3 -52 29				Zulevic, 1977: +1.3, +0.16.
84.790	123.8	2.38	2 8 +0.2 3 3.0 60		B 613		23 44.9 -38 20
84.793	124.0	2.37	2 7 +0.2 3 1.6 60	84.798	119.4	0.18	2 8 -0.1 4 0.2 36
84.792	123.9	2.38	2n 2.3 60-Inch	84.801	120.0	0.18	2 7 +0.2 4 36
				84.800	119.7	0.18	2n 0.2 36-Inch
16921	BU 857		23 40.5 +67 33	16970	STT 505		23 45.5 +20 25
79.915	299.7	1.29	2 5 -0.1 3 0.8 26	80.944	59.4	2.16	2 4 -0.3 3 3.2 26
79.923	298.4	1.44	2 5 -0.3 4 0.5 26	80.864	62.3	2.40	2 4 -0.4 3 3.0 26
79.945	298.0	1.52	2 4 -0.1 3 0.3 26	81.867	62.0	2.43	2 5 -0.1 4 3.0 26
79.928	298.7	1.42	3n 0.5 26-Inch	81.886	59.1	2.20	2 4 -0.3 3 2.8 26
				81.640	60.7	2.30	4n 3.0 26-Inch
16928	BU 858		23 41.3 +32 34		FIN 292		23 45.8 -69 41
79.890	235.0	0.84	2 5 -0.2 3 1.2 26	78.773	7.8	2.13	4 5 +0.3 1 0.4 36
79.945	233.7	0.92	2 6 +0.1 3 0.8 26	78.781	8.1	2.15	1 4 +0.5 1 0.2 36
79.956	233.2	0.97	2 6 0.0 3 0.6 26	78.784	6.2	2.13	1 6 +0.5 1 0.2 36
79.930	234.0	0.91	3n 0.9 26-Inch	78.779	7.4	2.14	3n 0.3 36-Inch
16929	A 423		23 41.4 -08 38	16989	BU 726		23 46.6 -12 45
78.776	189.6	1.82	1 5 +0.4 1 1.0 36	84.790	299.8	0.64	2 7 +0.3 3 1.5 60
78.784	191.5	1.83	1 8 +0.3 1 0.8 36	84.793	297.8	0.72	2 6 -0.1 3 1.2 60
78.787	192.1	1.84	2 6 +0.4 1 0.8 36	84.792	298.8	0.68	2n 1.4 60-Inch
78.782	191.1	1.83	3n 0.9 36-Inch				
	RST 4130		23 41.5 -11 58	17001	D 27		23 47.3 +63 13
84.773	100.9	0.49	2 6 +0.1 3 0.6 60	79.915	356.1	2.04	2 5 -0.1 3 2.4 26
84.782	99.9	0.37	2 6 -0.2 3 0.6 60	79.923	355.4	2.01	2 5 -0.2 4 2.0 26
84.784	100.2	0.41	2 5 +0.4 3 0.0 60	79.945	356.0	2.05	2 5 +0.1 3 2.4 26
84.780	100.3	0.42	3n 0.4 60-Inch	79.928	355.8	2.03	3n 2.3 26-Inch

MICROMETER MEASURES OF 2589 DOUBLE STARS
TABLE 2 (Cont.)

211

17073	BU 1153	23 52.7 +60 42	17141	HLD 59	23 59.1 +53 15
76.728	322.8 0.50	3 7 0.0 4 0.3 26	79.923	14.0 1.16	2 5 -0.1 4 0.0 26
76.728	322.8 0.50	1n 0.3 26-Inch	80.659	14.1 1.15	2 7 0.0 4 0.2 26
			80.928	10.4 1.08	2 5 0.0 4 0.3 26
			80.503	12.8 1.13	3n 0.2 26-Inch
17105	A 426	23 56.2 +25 20			
79.797	332.6 0.31	2 7 -0.1 4 0.3 26			
79.885	328.8 0.34	2 7 -0.2 4 0.3 26	17151	A 1498	23 59.5 +54 41
79.890	326.6 0.35	2 5 -0.4 3 0.3 26	86.690	83.4 0.46	2 5 0.0 3 0.3 26
79.857	329.3 0.53	3n 0.3 26-Inch	86.808	86.2 0.40	2 5 0.0 3 26
Heintz, 1962: +4.2, +0.04.			86.824	84.3 0.34	2 6 -0.1 3 0.2 26
Costa, Docobo, 1983: +3.0, +0.03.			86.830	85.3 0.36	2 7 -0.2 3 0.2 26
			86.788	84.8 0.39	4n 0.2 26-Inch
17111	A 2100	23 56.8 +04 43			
77.746	199.0 0.26	1 5 0.0 4 0.5 26			
77.760	197.8 0.24	1 5 -0.1 3 0.6 26	17149	STF 3050	23 59.5 +33 43
77.946	197.5 0.23	1 5 +0.1 3 0.6 26	78.948	308.6 1.74	2 5 -0.4 3 0.4 26
77.817	198.1 0.24	3n 0.6 26-Inch	79.718	306.9 1.60	2 5 -0.2 3 0.1 26
Heintz, 1975: -1.4, -0.03.			79.797	308.9 1.65	2 8 -0.1 4 0.2 26
			79.846	306.4 1.62	2 7 +0.2 4 0.2 26
			84.962	315.3 1.60	2 5 -0.4 3 0.0 26
17126	STF 3047	23 57.9 +57 23	85.967	316.3 1.78	2 5 -0.4 3 0.2 26
79.923	74.5 1.26	2 4 -0.2 4 0.0 26	85.997	315.8 1.89	2 5 -0.3 3 0.3 26
80.659	73.4 1.19	2 7 0.0 4 0.4 26	79.577	307.7 1.65	4n 0.2 26-Inch
80.928	73.4 1.10	2 5 0.0 4 0.2 26	85.642	315.8 1.76	3n 0.2 26-Inch
80.503	73.8 1.18	3n 0.2 26-Inch	Heintz, 1974: -0.8, +0.11; -0.9, +0.16.		
			Franz, 1955: -2.2, -0.05; -1.9, -0.07.		

PUBLICATIONS
OF THE
UNITED STATES
NAVAL OBSERVATORY

SECOND SERIES

VOLUME XXV



U. S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1989

CONTENTS OF VOLUME XXV

- I. Broad Band Spectral Energy Distributions of T Tauri Stars in the
Taurus-Auriga Region
- II. Micrometer Measures of 711 Double Stars
- III. Micrometer Measures of 2589 Double Stars