

Table 3. Observations and residuals.

WDS 00182+7257 = ADS 243 = A 803 = HIP 1461						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1904.62	175.2	0.33	3	A	4.0	-0.042
1916.70	176.6	0.31	2	A	-1.0	-0.024
1943.94	193.4	0.28	2	VBs	-7.3	0.048
1944.08	197.9	0.29	2	VBs	-3.0	0.059
1945.97	195.6	0.31	3	VBs	-7.7	0.086
1958.30	217.6	0.14	2	VBs	-5.2	-0.048
1960.80	239.0	0.2	3	Hei	11.4	0.018
1962.725	232.0	0.12	3	B	0.5	-0.059
1983.0688	273.2	0.181	1	McA1987b	-1.1	-0.007
1983.7104	276.8	0.191	1	McA1987b	1.3	0.002
1984.0547	275.8	0.178	1	McA1987b	-0.3	-0.012
1984.7015	278.3	0.195	1	McA1987b	1.0	0.004
1985.8402	279.4	0.196	1	McA1987b	0.1	0.002
1985.8456	278.8	0.198	1	McA1987b	-0.5	0.004
1986.8859	280.6	0.201	1	McA1989	-0.5	0.004
1987.7596	283.0	0.204	1	McA1989	0.4	0.005
1988.6580	284.1	0.210	1	McA1990	0.1	0.008
1991.25	288.0	0.213	1	HIP1997a	-0.1	0.004
1994.7084	293.2	0.225	1	Hrt2000a	0.1	0.006
1998.665	299.0	0.232	1	Sca2000c	0.8	0.000
1998.665	297.3	0.233	1	Sca2000c	-0.9	0.001

WDS 00335+4006 = ADS 463 = HO 3 = HIP 2643						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1887.37**	121.3	0.40	2	Ho, 2 Sp	-11.7	-0.006
1894.88	-	-	1	Ho	(122.0	0.473)
1896.10**	113.3	0.30	2	Sp	-6.9	-0.174
1906.03	-	-	1	A, 3 Dool	(104.3	0.353)
1948.79	137.8	0.340	2	VBs	-1.7	-0.014
1954.98	130.1	0.490	3	Cou	2.0	0.045
1962.40	118.0	0.470	3	Cou, 4 Bz	0.0	0.000
1970.38	103.8	0.350	3	Cou, 4 Wor	-0.9	-0.008
1985.8401	305.7	0.267	1	McA1987b	-1.1	0.015
1986.79	302.7	0.260	2	McA	0.0	-0.010
1987.7543	299.8	0.262	1	McA1989	0.9	-0.021
1988.6552	295.8	0.277	1	McA1990	0.1	-0.013
1991.2500	286.0	0.287	1	HIP1997a	-0.6	-0.001
1991.9016	284.4	0.274	1	Hrt1994	0.2	-0.008
1993.9194	275.8	0.245	1	Hrt1997	-0.2	-0.012
1994.7084	273.4	0.251	1	Hrt2000a	1.1	0.007
1995.7679	265.7	0.239	1	Hrt1997	-0.9	0.013
1996.6909	261.4	0.218	1	Hrt2000a	0.5	0.008

WDS 00583+2124 = ADS 805 = BU 302 = HIP 4558						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1876.2700	92.50	0.750	4	D	1.0	0.022
1883.5300	94.30	0.820	5	En	-0.4	0.106
1887.5300	97.00	0.610	6	Sp	0.4	-0.097
1888.0100	101.00	0.580	2	SBn	4.2	-0.126
1888.3200	99.90	0.890	7	STH	3.0	0.185
1889.0200	97.10	0.660	8	Sp	-0.2	-0.044
1898.0100	101.00	0.580	2	BRF	-0.5	-0.105
1903.1000	105.40	0.540	10	GrO	1.3	-0.135
1903.5800	103.00	0.580	3	BOW	-1.3	-0.093
1908.7400	106.60	0.650	10	Frm1,Wz2,Dob3,..	-0.4	-0.012
1912.0600	109.10	0.590	27	J10,Vdk2,GrO7,..	0.3	-0.065
1917.1700	112.20	0.660	3	VBs	0.6	0.017
1922.5700	112.90	0.570	13	Plg2,Mag3,Bail2,..	-1.7	-0.060
1926.9600	116.30	0.650	4	Rab	-0.9	0.031
1933.6500	123.50	0.650	3	Baz	2.2	0.047
1942.6000	125.70	0.710	3	VOU	-1.5	0.130
1944.8400	126.80	0.540	2	VBs	-2.0	-0.034
1948.8980	130.51	0.640	2	Rab	-1.2	0.077
1949.8300	133.70	0.560	2	Mrz	1.3	0.000
1950.0140	129.04	0.620	4	Rab	-3.4	0.060
1953.8700	132.70	0.570	3	COU	-2.7	0.021
1953.9480	131.12	0.580	6	Rab	-4.3	0.031
1957.9620	135.60	0.520	5	Rab	-3.0	-0.017
1958.9500	136.40	0.570	3	COU	-3.0	0.036
1961.7950	136.90	0.450	1	HLD	-4.8	-0.075
1961.8290	146.60	0.500	4	B	4.9	-0.025
1961.8400	134.80	0.430	3	COU	-6.9	-0.095
1965.7400	144.80	0.490	3	COU	-0.3	-0.023
1965.8800	141.60	0.500	3	COU	-3.6	-0.013
1970.7840	150.00	0.520	4	WOR	0.4	0.024
1971.1960	150.80	0.590	3	Behall	0.8	0.095
1971.7690	148.60	0.530	1	Ole	-1.9	0.037
1973.0990	152.40	0.550	3	Behall	0.6	0.062
1974.8060	150.50	0.420	3	Behall	-3.0	-0.062
1980.8670	161.30	0.390	3	WOR	1.5	-0.068
1986.8887	165.70	0.427	1	McA1989	-1.1	-0.004
1986.9010	169.60	0.450	3	WOR	2.8	0.019
1987.7596	167.20	0.420	1	McA1989	-0.7	-0.006
1988.6661	168.90	0.416	1	McA1990	-0.1	-0.006
1989.6135	170.90	0.412	1	McA1997	0.6	-0.005
1989.7119	170.50	0.413	1	Hrt1992b	0.1	-0.003
1990.8350	169.40	0.460	1	WSI1997	-2.5	0.050
1991.2500	172.70	0.402	1	HIP1997a	0.2	-0.006
1991.8400	179.00	0.470	1	TYC2002	5.7	0.066
1991.8961	173.00	0.403	1	Hrt1994	-0.4	-0.001
1994.7085	177.80	0.388	1	Hrt2000a	0.3	0.002
1995.7627	179.90	0.377	1	Hrt1997	0.7	-0.002
1995.9316	179.60	0.377	1	Hrt1997	0.1	-0.001
1998.6790	184.80	0.362	1	Sca2000c	0.7	0.004
1999.7119	186.40	0.355	1	Doc2001c	0.4	0.005
1999.8314	186.00	0.368	1	Msn2001b	-0.2	0.019
1999.8921	187.50	0.330	2	WSI2000b	1.1	-0.018

ORBITS FOR SIXTEEN BINARIES

WDS 01011+6022 = ADS 832 = A 926 = HIP 4755						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1905.6200	248.40	0.250	3	A	6.4	-0.001
1915.6900	258.20	0.280	2	A	0.6	-0.006
1947.0600	290.80	0.380	4	VBs	-0.6	0.030
1958.2000	299.40	0.300	3	VBs	-1.8	-0.061
1961.6970	300.60	0.380	3	Wor	-3.6	0.016
1964.0500	300.20	0.390	3	hz	-6.0	0.025
1968.9400	311.80	0.340	4	hz	1.5	-0.028
1971.7020	314.80	0.330	4	Wor	2.3	-0.039
1973.8600	317.40	0.410	3	hz	3.1	0.040
1975.8200	314.90	0.380	3	hz	-1.0	0.009
1981.8000	327.00	0.390	3	hz	6.3	0.018
1983.7104	322.00	0.388	1	McA1987b	-0.3	0.015
1985.8402	323.50	0.384	1	McA1987b	-0.5	0.011
1987.7570	325.20	0.379	1	McA1989	-0.3	0.006
1988.6606	326.30	0.387	1	McA1990	0.0	0.014
1991.2500	329.00	0.377	1	HIP1997a	0.7	0.004
1991.5800	327.10	0.320	1	TYC2002	-1.5	-0.053
1994.7084	332.10	0.383	1	Hrt2000a	1.0	0.009
1998.6660	334.80	0.382	1	Sca2000c	0.5	0.009

WDS 01014+1155 = ADS 828 = BU 867 = HIP 4775						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1880.2100	174.80	0.960	3	Bu	-2.8	0.099
1889.6200	174.10	0.990	6	Lv1,Sp5	-1.4	0.096
1904.8700	174.90	0.970	3	Dool2,Lv1	2.8	0.084
1911.2400	171.00	0.850	11	Fox3,GrO8	0.3	-0.009
1922.2300	168.80	0.830	7	A2,Chan3,Geb2	1.0	0.051
1940.2000	161.70	0.620	10	Sim4,Bz3,V3	1.0	0.059
1955.8600	151.00	0.310	9	Mul3,Cou3,Bz3	6.5	0.008
1958.7700	143.40	0.290	5	Mul3,VBs2	5.6	0.038
1961.9500	130.90	0.200	8	Hz4,B4	4.2	-0.003
1968.6100	103.10	0.190	4	Cou1,Hz3	21.0	0.046
1974.9100	35.30	0.160	3	Hz	-2.6	-0.033
1978.9100	21.70	0.180	4	Hln2,Hz2	-1.5	-0.074
1980.6600	14.30	0.230	3	Hz	-4.6	-0.053
1984.7700	12.30	0.300	3	Hz	0.7	-0.050
1987.7100	7.50	0.390	3	Hz2,McA1	-0.3	-0.007
1987.7596	6.70	0.390	1	McA1989	-1.1	-0.008
1988.6661	6.50	0.412	1	McA1990	-0.3	0.001
1990.3800	4.70	0.420	12	LeBeau2,Cou2,Hz6,Pri2	-0.4	-0.016
1991.2500	3.00	0.450	1	HIP1997a	-1.3	0.002
1991.7400	11.80	0.530	1	TYC2002	7.9	0.075
1993.7596	3.00	0.500	1	Bag1994	0.8	0.019
1995.9209	0.80	0.514	1	Hrt1997	0.1	0.008
1996.5405	1.40	0.525	1	Hrt2000a	1.2	0.013
1999.8315	359.60	0.586	1	Msn2001b	1.5	0.043
1999.9376	0.00	0.560	1	WSI2000b	1.9	0.016
2001.7695	352.60	0.560	1	WSI2002	-4.4	0.002

WDS 01112+4113 = ADS 974 = A 655 = HIP 5553						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1904.0500	144.80	0.280	3	A	-3.3	-0.008
1916.6700	166.40	0.350	3	A	-3.1	0.036
1921.2400	176.70	0.300	3	A	-0.3	-0.008
1930.7400	192.60	0.280	7	A5,VB2	-1.6	-0.002
1934.1300	203.90	0.260	5	VB4,A1	2.6	-0.010
1944.1700	222.80	0.240	6	VB,V3	-3.1	-0.003
1948.1400	242.70	0.230	6	Jef4,VB2	5.9	-0.008
1951.3900	251.50	0.230	6	VB4,Mark2	5.5	-0.007
1953.7500	253.80	0.260	4	Mr	1.1	0.021
1957.7900	256.00	0.240	5	B,Mr2,VB1	-7.6	-0.006
1960.9100	272.20	0.260	7	Wor4,C3	0.7	0.005
1962.4900	277.50	0.240	8	C6,B2	2.2	-0.020
1966.9600	284.50	0.280	10	VB5,C3,Gr2	-0.8	0.004
1971.0100	288.70	0.270	9	C5,VB3,Mr1	-4.5	-0.023
1974.3900	293.00	0.290	7	Hln4,Wor3	-6.2	-0.016
1977.8100	303.10	0.320	7	hz6,C1	-1.7	0.000
1981.7300	315.00	0.380	3	hz	4.4	0.046
1984.7200	324.20	0.330	3	hz	9.4	-0.013
1988.8081	328.00	0.350	1	Iso1990b	7.9	-0.002
1991.2500	322.00	0.360	1	HIP1997a	-1.2	0.004
1992.6913	320.00	0.360	1	Miu1993	-5.0	0.003
1992.6940	324.00	0.350	1	Miu1993	-1.1	-0.007
1994.7085	326.90	0.365	1	Hrt2000a	-0.7	0.007
1995.7708	328.20	0.355	1	Hrt1997	-0.7	-0.003

WDS 01361-2954 = HJ 3447 = HIP 7463						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1835.88	74.0	3.0	1	HJ 1847a	-6.0	0.175
1837.11	75.5	3.12	2	HJ 1847b	-4.7	0.308
1846.35	82.8	2.89	4	Jc 1849	1.3	0.179
1851.03	82.5	2.62	2	Jc 1848a	0.3	-0.038
1852.90	82.5	2.50	3	Jc 1848b	0.0	-0.137
1877.80	90.6	1.99	2	Hwe1878	3.7	-0.347
1877.81	89.3	2.43	1	Stn1878	2.4	0.093
1881.84	87.3	2.19	3	Bu 1883	-0.4	-0.095
1888.97	93.2	2.16	2	Hl 1888	4.0	-0.032
1888.99	89.6	2.31	2	Lv 1930	0.4	0.118
1894.83	93.3	1.82	6	Sct1896a	2.7	-0.294
1894.87	91.4	2.09	4	Tb 1895	0.8	-0.024
1895.96	90.0	2.5	1	ByS1900	-0.9	0.401
1896.81	92.5	2.05	2	See1898c	1.4	-0.037
1897.91	94.1	1.87	3	Sct1899	2.7	-0.202
1898.96	92.8	2.2	1	Sol1899	1.2	0.142
1900.07	93.5	2.11	3	Tb 1901	1.6	0.067
1900.76	90.4	1.80	1	Sol1900	-1.7	-0.233
1902.90	97.0	1.80	3	Sct1903	4.3	-0.204
1904.92	95.3	1.81	5	Dob1927	2.1	-0.166
1905.87	97.8	1.80	3	Dob1927	4.3	-0.162
1906.9	95.0	2.0	1	Hst1910a	1.2	0.052
1907.95	97.2	1.90	3	Sct1908	3.1	-0.033

ORBITS FOR SIXTEEN BINARIES

WDS 01361-2954 = HJ 3447 = HIP 7463						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1909.78	96.6	1.97	3	Ol 1910a	2.0	0.063
1913.85**	92.5	1.58	1	Gnd1914	-3.4	-0.269
1916.86	98.3	1.62	2	Ol 1920c	1.4	-0.186
1916.90	95.8	1.77	1	Vou1925a	-1.1	-0.035
1918.87	100.2	1.98	2	Daw1922	2.7	0.203
1924.78	101.2	1.75	4	Vou1926	1.5	0.059
1926.91**	107.2	1.880	4	WFD1949a	6.7	0.221
1928.65	102.1	1.76	4	Vou1932	0.9	0.127
1928.69	103.0	1.52	4	Bru1928	1.8	-0.113
1928.87	103.8	1.77	2	Jsp1964	2.5	0.140
1930.07	102.9	1.78	2	Fin1932a	1.1	0.168
1930.40	100.4	1.73	4	Wal1934	-1.5	0.122
1930.86	102.6	1.65	4	Ol 1939	0.5	0.049
1934.02	105.8	1.80	3	Daw1937	2.3	0.246
1934.43	104.8	1.47	4	B 1935c	1.2	-0.078
1934.98	105.1	1.55	4	Fin1936b	1.2	0.011
1936.69	104.9	1.40	4	Smw1951	0.2	-0.114
1942.22	109.0	1.29	4	B 1949c	1.6	-0.142
1942.55	110.5	1.45	3	Vou1955	2.9	0.023
1945.87	108.9	1.31	3	Gtb1948	-0.5	-0.067
1946.70	106.6	1.51	2	WoH1948	-3.3	0.145
1946.81	108.0	1.35	4	Gtb1948	-2.0	-0.013
1947.21	111.2	1.18	4	B 1950c	1.0	-0.177
1948.96	112.8	1.20	2	B 1951a	1.6	-0.131
1950.57	112.11	1.137	1	Lem1958	-0.1	-0.171
1953.69	114.6	1.13	4	B 1956a	0.3	-0.132
1954.67	110.18	1.083	1	Lem1958	-4.8	-0.165
1954.96	116.4	1.20	4	Chu1956	1.3	-0.044
1956.86	119.1	1.12	3	B 1957b	2.6	-0.096
1959.75	121.5	1.05	4	B 1960a	2.8	-0.125
1960.76	119.4	1.05	4	B 1961a	-0.1	-0.111
1961.91	123.9	0.91	3	Mro1966a	3.5	-0.235
1963.88	125.8	1.12	2	Knp1964	3.7	0.002
1963.96	124.7	0.99	5	B 1965a	2.6	-0.127
1964.94	125.9	0.98	3	B 1966a	2.9	-0.124
1966.35	128.2	1.05	2	Knp1967	3.9	-0.035
1968.70	129.8	1.08	4	Mro1969a	3.3	0.026
1968.90	123.4	0.77	1	Nbg1969	-3.3	-0.282
1970.521	133.6	0.99	1	Wor1972b	5.3	-0.041
1970.578	132.2	0.99	1	Wor1972b	3.9	-0.040
1970.90	130.2	1.04	2	Kle1973b	1.5	0.014
1975.723	133.8	0.92	4	Wor1978	-0.1	-0.049
1976.790	136.5	1.06	3	Hln1977b	1.4	0.103
1977.73	138.3	1.03	3	Hei1978b	2.1	0.084
1980.000**	152.0	1.40	3	ClI2003	13.0	0.478
1982.660	141.2	1.07	2	Ary1983	-1.3	0.174
1986.810	147.8	1.06	2	Ary1983	-0.5	0.199
1989.726**	159.7	1.90	1	Tob2003	7.1	1.059
1989.9355	150.4	0.814	1	Hrt1993	-2.5	-0.025
1990.000**	157.0	1.80	3	ClI2003	4.0	0.961
1991.25	153.3	0.814	1	HIP1997a	-1.7	-0.017

WDS 01361-2954 = HJ 3447 = HIP 7463						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1991.50	153.1	0.838	1	TYC2000a	-2.2	0.008
1991.7129	154.1	0.810	1	Hrt1996b	-1.6	-0.019
1991.7212	154.4	0.820	1	Hrt1996b	-1.3	-0.009
1996.8216	166.5	0.768	1	Hor2001b	2.6	-0.039
1999.7677	167.1	0.78	1	Hor2000	-1.7	-0.020
1999.7704	167.2	0.78	1	Hor2000	-1.6	-0.020
1999.7704	167.5	0.78	1	Hor2000	-1.3	-0.020
1999.7732	167.7	0.79	1	Hor2000	-1.1	-0.010
1999.7814	167.1	0.78	1	Hor2000	-1.8	-0.020
1999.7841	167.2	0.78	1	Hor2000	-1.7	-0.020
1999.7841	167.4	0.79	1	Hor2000	-1.5	-0.010
1999.7950	169.1	0.81	1	Hor2000	0.2	0.010
2001.8675	169.2	0.819	1	Hor2006	-3.2	0.021
2001.8676	170.7	0.784	1	Hor2006	-1.7	-0.014
2001.8676	171.2	0.783	1	Hor2006	-1.2	-0.015
2001.8840	171.0	0.790	1	Hor2006	-1.4	-0.008
2001.8840	171.3	0.776	1	Hor2006	-1.1	-0.022
2001.8840	171.3	0.795	1	Hor2006	-1.1	-0.003

WDS 01532+1526 = ADS 1503 = BU 260 = HIP 8810						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1875.81	228.0	0.56	3	D 1883	2.3	-0.005
1884.97	230.6	0.64	2	Ho 1890	-0.2	0.003
1892.866	232.7	0.70	1	Jns1892b	-1.6	0.002
1897.982	234.0	0.70	2	Brs1911	-2.3	-0.036
1899.871	236.3	0.78	5	Doo1901	-0.7	0.030
1900.016	235.5	0.77	2	See1911	-1.5	0.019
1902.779	237.9	0.77	3	Doo1905	-0.1	0.000
1903.48	238.4	0.65	3	Bow1903a	0.2	-0.125
1903.92	239.0	0.74	1	Bry1903	0.6	-0.038
1903.93	237.8	0.79	1	L 1903	-0.6	0.012
1904.86	235.8	0.75	1	Fur1904	-2.9	-0.035
1909.07	241.3	0.83	1	L 1909	1.3	0.017
1909.62	241.6	0.78	3	Doo1915b	1.4	-0.037
1910.01	234.5	0.83	1	L 1921	-5.8	0.010
1911.99	241.3	0.81	4	Fur1921	0.4	-0.022
1916.30	242.3	0.82	3	Lv 1930	0.2	-0.040
1916.38	244.8	1.03	4	Bea1930	2.7	0.170
1919.68	240.8	0.99	2	Lv 1930	-2.2	0.110
1924.771	243.0	0.93	2	VBs1927a	-1.2	0.021
1924.80	243.0	0.99	1	Bal1925	-1.2	0.081
1925.00	242.3	0.88	2	Plq1926a	-2.0	-0.030
1925.41	242.7	0.93	2	Fur1927	-1.7	0.017
1927.07	245.6	0.86	1	Fur1927	0.8	-0.062
1932.91	246.7	1.14	1	Gcb1934	0.6	0.189
1933.88	246.5	0.94	3	Brt1939a	0.2	-0.016
1936.87	247.8	0.95	4	Smw1951	0.8	-0.020
1937.86	247.5	0.84	3	Dur1938	0.3	-0.135
1938.70	246.9	1.01	3	Baz1941	-0.5	0.032
1942.63	247.7	1.06	3	Vou1955	-0.5	0.065
1950.04	253.0	0.92	2	Mrz1956	3.4	-0.103

ORBITS FOR SIXTEEN BINARIES

WDS 01532+1526 = ADS 1503 = BU 260 = HIP 8810						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1953.02	252.2	1.08	2	VBs1960	2.0	0.047
1954.98	252.8	1.04	2	Cou1955c	2.2	0.000
1960.08	251.1	1.05	5	Hei1961	-0.4	-0.004
1961.569	252.7	1.15	4	VBs1965	0.9	0.092
1961.74	254.2	1.15	5	B 1962d	2.4	0.091
1961.774	254.2	1.18	2	VBs1965	2.4	0.121
1962.740	251.3	1.01	4	Wor1967b	-0.7	-0.051
1965.019	253.0	0.99	3	Wak1966	0.6	-0.077
1971.86	253.7	1.04	3	Hei1975a	0.1	-0.041
1971.980	259.7	0.98	1	VBs1975	6.1	-0.101
1972.859	253.3	0.98	1	Ole1975a	-0.4	-0.102
1974.397	254.6	1.09	4	Wor1978	0.6	0.005
1982.895	254.0	1.20	3	Mss1985	-1.4	0.104
1986.846	256.5	1.22	3	Wor1989	0.4	0.121
1990.945	254.8	1.09	1	WSI1997	-2.0	-0.011
1991.25	256.4	1.154	1	HIP1997a	-0.4	0.053
1991.57	255.0	1.121	1	TYC2000a	-1.9	0.020
1991.941	255.5	1.12	1	WSI1997	-1.5	0.019
1992.93	259.0	0.99	2	Hei1995	1.9	-0.112
1994.986	256.3	1.12	1	WSI1999a	-1.2	0.018
1997.039	256.0	1.08	1	WSI1999c	-1.8	-0.022
1998.907	257.4	1.07	1	WSI2000a	-0.7	-0.032
1998.918	257.6	1.09	1	WSI2000a	-0.5	-0.012
1998.964	257.6	1.03	1	WSI2000a	-0.5	-0.072

WDS 02333+5219 = ADS 1938 = STT 42 AB = HIP 11889						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1847.93	290.9	0.34		Mad 2, STT 3	4.6	0.076
1903.18**	125.2	0.10		Hu 4, A 2	-47.6	0.041
1923.17**	213.9	0.12		A 2, Mag 3	-32.1	0.020
1942.98	255.0	0.16		VBs	-9.8	-0.014
1947.07	262.5	0.16		VBs	-4.4	-0.026
1952.30	267.9	0.16		VBs 6,Mark 3,Mul 6	-1.4	-0.039
1959.46	270.9	0.21		GrO 1,VBs 6,Htz 10	-1.3	0.001
1964.34	274.5	0.22		B 7,Wor 6,VBs 9	0.5	0.010
1974.06	277.5	0.19		Cou 5,McA 5,Wor 3	-0.5	-0.004
1976.9227	280.0	0.185		McA1979a	0.7	0.000
1977.9166	277.3	0.171		McA1982b	-2.5	-0.010
1977.9193	279.7	0.181		McA1982b	-0.1	0.000
1978.6182	279.8	0.181		McA1980b	-0.4	0.003
1979.7732	281.0	0.177		McA1982d	0.2	0.004
1980.8955	284.7	0.166		McA1984b	3.2	-0.002
1981.35	283.4	0.16		McA 1, Htz 3	1.7	-0.006
1982.7604	279.8	0.157		McA1987b	-2.8	-0.002
1982.7657	282.6	0.160		McA1987b	0.0	0.001
1983.0663	282.8	0.161		McA1987b	0.0	0.004
1983.46	289.1	0.15		Cou 4	6.0	-0.005
1983.7107	282.9	0.155		McA1987b	-0.4	0.001
1984.7046	284.3	0.149		McA1987b	0.3	0.001
1985.8540	285.0	0.143		McA1987b	0.1	0.002
1986.8916	285.8	0.135		McA1989	0.0	0.000
1987.7627	286.8	0.130		McA1989	0.1	0.000
1988.6581	287.9	0.125		McA1990	0.3	0.001
1989.7122	288.9	0.096		Hrt1992b	0.1	-0.021
1991.25	290.0	0.114		HIP1997a	-0.8	0.007
1994.7087	298.4	0.080		Hrt2000a	1.2	-0.004
1995.7601	301.0	0.080		Hrt1997	1.0	0.004
1995.9266	301.1	0.076		Hrt1997	0.6	0.001
1996.6913	300.7	0.074		Hrt2000a	-2.2	0.004

WDS 02563+7253 = STF 312 AB = HIP 13677						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1830.04	10.3	4.0	1	HJ 1833c	-2.7	0.357
1832.08	13.9	3.59	5	StF1837	0.7	-0.039
1844.33	15.6	3.71	1	Mad1845	1.2	0.165
1857.67	16.1	3.49	1	D 1883	0.3	0.043
1857.95	18.1	3.32	2	Se 1860b	2.2	-0.125
1863.23**	8.93	3.37	1	Mai1863	-7.5	-0.035
1865.10	18.4	3.14	1	Eng1868	1.7	-0.250
1866.42	17.5	3.26	3	D 1884	0.7	-0.120
1869.78**	6.65	3.45	1	Mai1869	-10.6	0.097
1873.48	17.6	3.31	2	Stt1878	0.0	-0.013
1874.58	19.5	3.10	7	Du 1876	1.7	-0.214
1876.60	20.1	3.2	1	Gld1906A	2.1	-0.098
1879.03	19.5	3.15	3	Dob1927	1.2	-0.127
1879.580	20.8	3.19	2	Hl 1877a	2.4	-0.083
1882.16**	20.6	3.41	3	Je 1882	1.9	0.159
1889.937	19.5	3.22	3	Hl 1888	-0.2	0.036
1892.90	25.4	3.10	2	Glp1894a	5.4	-0.058
1894.14	19.5	3.24	1	Ebl1895	-0.7	0.093
1895.862	21.0	3.31	2	Cls1896	0.6	0.179
1900.32**	22.4	3.33	2	Coh1911	1.4	0.239
1901.94**	23.8	3.60	4	Dob1927	2.6	0.524
1902.07	21.3	3.03	2	Hu 1911	0.1	-0.045
1902.12**	21.0	3.19	1	Pos1911	-0.3	0.116
1902.50**	27.6	3.634	5	WFD1909	6.3	0.563
1903.09	22.1	3.00	2	Dob1927	0.7	-0.065
1904.65	22.2	3.15	5	Gui1912	0.6	0.099
1905.00**	24.6	3.42	2	Dob1927	3.0	0.373
1905.03	19.4	3.14	1	Lag1912	-2.3	0.093
1905.04	18.4	3.08	1	Frm1907	-3.3	0.033
1909.06	20.4	3.06	2	Sto1910	-1.8	0.051
1909.24	21.5	3.12	3	Has1911	-0.7	0.113
1909.38	22.9	2.99	6	Dob1927	0.6	-0.016
1910.36	22.8	3.10	3	Shr1913	0.4	0.103
1910.99**	24.5	3.30	1	Sto1911	2.0	0.309
1911.08	20.5	2.98	1	Sto1921	-2.0	-0.010
1911.919	19.6	2.98	4	Abt1912	-3.0	-0.002
1911.92	19.6	2.98	4	Abt1916	-3.0	-0.002
1913.24	20.4	2.69	1	Boh1921	-2.4	-0.279
1914.07	22.2	2.80	1	Rab1923	-0.7	-0.161
1914.97**	23.6	3.22	2	Sto1921	0.5	0.268
1920.05**	44.0	2.94	1	Sto1921	20.2	0.038
1921.73	25.3	2.93	1	Gui1931	1.2	0.045
1922.93	23.4	2.82	1	Spr1928	-0.8	-0.053
1923.24	26.1	2.88	4	B 1925a	1.8	0.010
1925.72	24.5	3.00	2	Dob1927	-0.2	0.156
1927.76	23.8	2.88	3	Baz1929b	-1.2	0.056
1930.44	24.0	2.83	3	Kom1935a	-1.4	0.034
1930.94	24.7	2.97	4	Baz1932a	-0.8	0.179
1937.26	25.3	2.81	5	Vat1939	-1.2	0.086
1938.02	26.8	2.82	2	Woy1939	0.1	0.104

WDS 02563+7253 = STF 312 AB = HIP 13677						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1949.99	28.85	2.585	1	Kpr1992	0.0	0.000
1950.19	29.0	2.50	3	Fok1951	0.2	-0.082
1955.11	27.1	2.57	3	Rab1961b	-2.7	0.043
1957.14	27.1	2.54	2	Fle1958	-3.1	0.037
1961.766	31.69	2.448	1	USN1963	0.6	-0.002
1962.00	32.5	2.40	3	B 1962d	1.4	-0.047
1962.11	32.4	2.31	4	B 1963b	1.2	-0.136
1962.992	31.33	2.439	1	USN1963	0.0	0.003
1963.691	32.5	2.33	5	Wor1971	1.0	-0.097
1964.687	32.33	2.411	1	USN1969	0.6	-0.005
1964.892	31.8	2.35	4	Wak1966	0.0	-0.063
1965.11	31.1	2.44	4	Hei1967b	-0.7	0.029
1966.008	31.8	2.19	2	Wak1969	-0.2	-0.210
1966.823	31.94	2.431	1	USN1969	-0.2	0.041
1967.807	32.75	2.369	1	USN1974	0.4	-0.010
1969.168	32.4	2.30	5	Wak1972	-0.3	-0.062
1972.804	34.30	2.314	1	USN1974	0.8	-0.005
1973.93	35.6	2.23	3	Hei1975a	1.9	-0.075
1974.691	33.7	2.28	1	Wak1985	-0.2	-0.016
1974.920	33.5	2.28	4	Wak1985	-0.5	-0.013
1975.81	35.3	2.33	2	Hln1976b	1.1	0.048
1978.90	34.32	2.292	3	Tor1980	-0.6	0.047
1978.95	36.2	2.24	2	Hei1980a	1.3	-0.004
1983.000	34.0	2.40	3	Cll2003	-1.9	0.206
1988.92	39.8	2.10	3	Hei1990b	2.3	-0.020
1991.25	38.7	2.120	1	HIP1997a	0.6	0.029
1991.59	39.5	2.107	1	TYC2000a	1.3	0.021
1994.986	38.9	2.03	1	WSI1999a	-0.3	-0.013
1997.09	41.9	2.14	2	Hei1998	2.1	0.124
1998.918	41.7	1.97	1	WSI2000a	1.4	-0.023
1998.931	41.2	1.92	1	WSI2000a	0.9	-0.073
2001.93	42.8	1.96	2	Alz2003b	1.5	0.006
2001.94	41.6	1.94	1	Ctt2002	0.3	-0.014
2003.94	44.6	1.92	1	Alz2005b	2.7	-0.008

ORBITS FOR SIXTEEN BINARIES

WDS 04362+0814 = ADS 3326 = A 1840 AB = HIP 21434						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1908.7600	221.0	0.28	2	A	0.0	0.013
1918.8900	213.8	0.28	3	A	3.4	0.002
1932.0400	219.3	0.29	1	Gro	22.3	0.018
1933.1200	195.9	0.24	2	B	0.1	-0.030
1934.0300	192.3	0.30	2	A	-2.6	0.031
1935.0600	188.4	0.22	2	B	-5.4	-0.048
1937.7100	185.5	0.25	4	Vou	-5.3	-0.014
1944.7500	182.1	0.24	3	Vou	-0.5	-0.012
1945.7500	179.0	0.28	5	VBs	-2.3	0.030
1948.7400	168.2	0.19	2	VBs	-9.3	-0.053
1951.0300	167.8	0.17	2	VBs	-6.6	-0.068
1951.8000	167.3	0.20	3	VBs	-6.0	-0.037
1956.1600	173.1	0.27	3	Mull	6.1	0.043
1958.0300	157.7	0.19	3	VBs	-6.4	-0.033
1960.7300	161.8	0.21	3	Cou	2.1	-0.007
1960.8090	158.8	0.22	1	Wor	-0.8	0.004
1962.5990	151.8	0.18	3	Wor	-4.7	-0.032
1962.7880	154.4	0.20	4	B	-1.8	-0.012
1964.1160	150.0	0.20	1	Cou	-3.9	-0.009
1965.6600	153.1	0.27	4	Bz	2.1	0.065
1968.8400	143.8	0.22	3	Morel	-1.1	0.022
1980.907	113.0	0.175	1	Tok1982a	-4.6	0.001
1982.852	109.1	0.180	1	Tok1983	-3.3	0.009
1983.0500	112.8	0.179	1	McA1987b	0.9	0.009
1985.8459	103.4	0.166	1	McA1987b	-0.7	0.001
1986.8918	101.2	0.166	1	McA1989	0.1	0.004
1987.7601	98.5	0.163	1	McA1989	0.1	0.003
1991.25	87.0	0.150	1	HIP1997a	-0.2	-0.001
1991.9020	86.4	0.150	1	Hrt1994	1.5	0.001
1993.0950	81.2	0.148	1	Hrt2000a	0.6	0.004
1996.8690	66.7	0.135	1	Hrt2000a	2.2	0.009

WDS 05003+3924 = ADS 3589 = STT 92 AB = HIP 23261						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1843.26	226.6	2.66	1	Mad1844	-2.7	0.034
1847.08	233.4	2.92	1	Da 1867	2.4	0.279
1849.09	225.7	2.67	3	Stt1878	-6.2	0.021
1852.22	231.8	2.60	2	Mad1856	-1.5	-0.062
1867.39	241.1	2.80	3	D 1883	1.3	0.060
1872.01	242.9	2.75	3	D 1883	1.2	-0.017
1877.08	243.8	2.49	1	Plm1878	0.1	-0.309
1878.04	247.4	2.78	1	Bu 1879	3.3	-0.026
1879.174	247.2	2.81	2	Hl 1877a	2.7	-0.003
1883.28	246.8	2.64	5	Eng1885b	0.6	-0.201
1885.06	248.25	2.35	1	Nst1904	1.4	-0.504
1890.990	250.7	2.69	2	Hl 1888	1.6	-0.207
1891.02	247.8	2.92	2	StH1901	-1.3	0.022
1893.18	253.4	2.01	2	L 1894a	3.5	-0.904
1894.00	256.35	1.95	2	Nst1904	6.2	-0.970
1898.36	252.6	3.02	3	Hu 1901a	0.8	0.065
1900.998	255.7	2.97	3	Doo1905	3.0	-0.006
1902.08	253.3	3.25	1	Pos1911	0.2	0.265
1902.086	252.6	2.96	2	Com1906	-0.5	-0.025
1903.23	253.0	2.99	1	L 1903	-0.5	-0.005
1908.21	257.7	3.25	1	Prz1908	2.5	0.213
1908.66	257.2	3.20	3	Doo1915b	1.8	0.159
1909.07	255.2	2.85	1	Roe1909	-0.3	-0.194
1910.16	255.9	3.29	1	Wz 1912	0.0	0.236
1910.17	254.6	3.18	2	Bow1921	-1.3	0.126
1910.18	255.0	2.94	2	Com1921a	-0.9	-0.114
1910.51	256.7	3.08	3	Dob1927	0.7	0.023
1910.84	260.2	3.36	2	Edd1921	4.1	0.300
1912.04	254.0	3.34	3	Neu1923	-2.5	0.270
1914.76	257.1	3.18	1	Vys1936	-0.3	0.086
1916.04	259.6	3.07	3	Com1921a	1.8	-0.036
1916.51	260.2	3.71	2	Dob1927	2.2	0.600
1916.95	259.3	3.05	3	BrF1927	1.2	-0.064
1917.15	257.6	3.10	3	Com1921a	-0.6	-0.016
1918.08	258.5	3.19	3	Com1921a	0.0	0.066
1918.86	259.9	3.18	1	VvS1919	1.2	0.048
1922.64	258.2	3.09	3	Fur1925	-1.7	-0.077
1923.21	258.6	3.11	1	Jck1925	-1.5	-0.062
1925.12	263.5	2.53	2	Jan1925	2.8	-0.660
1925.99	262.2	3.04	5	Sch1927a	1.2	-0.158
1926.09	259.4	3.10	1	Fat1927	-1.6	-0.099
1927.08	262.1	3.26	2	Fat1927	0.8	0.052
1927.12	262.1	3.15	4	Rab1930a	0.8	-0.059
1927.15	264.2	3.36	3	Mas1928	2.9	0.151
1930.37	263.5	3.11	3	Kui1933	1.2	-0.130
1930.57	261.0	3.06	4	Bon1938	-1.3	-0.182
1933.07	264.2	2.86	1	Gcb1934	1.1	-0.406
1933.25	258.5	4.17	1	Dob1934	-4.6	0.902
1934.87	264.8	3.12	3	Baz1935c	1.2	-0.164
1936.15	262.7	3.24	3	Ol 1939	-1.3	-0.057
1939.09	263.8	3.29	6	Rab1953	-1.0	-0.036

ORBITS FOR SIXTEEN BINARIES

WDS 05003+3924 = ADS 3589 = STT 92 AB = HIP 23261

t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1950.16	267.3	3.38	6	Rab1961b	-0.6	-0.059
1951.18	266.8	3.42	3	Rab1961b	-1.4	-0.029
1956.17	268.6	3.34	4	Rab1961b	-0.9	-0.161
1961.18	270.3	3.49	4	Hei1963b	-0.4	-0.064
1963.973	272.2	3.70	4	Wor1967b	0.8	0.116
1964.049	267.66	3.672	1	USN1969	-3.8	0.087
1964.789	267.47	3.693	1	USN1969	-4.1	0.100
1964.835	267.42	3.622	1	USN1969	-4.2	0.029
1964.873	267.50	3.668	1	USN1969	-4.1	0.074
1964.895	267.82	3.699	1	USN1969	-3.8	0.105
1975.767	264.85	3.713	1	USN1978	-9.4	0.001
1975.808	264.76	3.724	1	USN1978	-9.5	0.012
1975.99	276.4	3.68	2	Hei1978b	2.1	-0.034
1976.108	264.47	3.714	1	USN1978	-9.8	-0.002
1976.717	274.6	3.78	3	Wor1989	0.2	0.058
1990.167	280.2	3.82	3	Wor1998	2.8	-0.051
1990.697	279.6	3.65	2	Thr1996	2.1	-0.227
1990.99	286.7	3.79	1	Gir1992	9.1	-0.090
1991.25	278.0	3.947	1	HIP1997a	0.4	0.064
1991.50	278.1	3.95	1	TYC2002	0.4	0.064
1997.10	281.8	3.78	2	Alz1998b	3.0	-0.168
1997.833	280.0	4.02	1	Slm1999	1.0	0.063
1998.08	281.7	4.09	4	Ctt2000	2.7	0.131
2002.977	280.7	4.11	2	WSI2004a	0.7	0.096

WDS 08017-0836 = ADS 6526 = A 1580 = HIP 39264

t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1907.2400	132.80	0.300	3	A	1.6	-0.016
1917.1200	138.60	0.280	2	A	-1.1	-0.003
1944.2940	181.70	0.140	1	VBs	3.0	-0.053
1944.8800	188.80	0.250	4	Voute	8.9	0.058
1951.0580	187.10	0.160	1	VBs	-6.3	-0.022
1951.0690	188.30	0.140	1	VBs	-5.1	-0.042
1986.8895	261.10	0.247	1	McA1989	-2.8	0.011
1987.2745	265.40	0.239	1	McA1989	0.9	0.003
1989.3110	267.60	0.245	1	McA1990	0.4	0.005
1989.9363	268.30	0.246	1	Hrt1993	0.3	0.005
1990.3488	266.90	0.249	1	Hrt1993	-1.7	0.007
1990.9219	267.30	0.247	1	Hrt1996b	-2.0	0.005
1991.2500	270.00	0.245	1	HIP1997a	0.2	0.002
1991.9052	272.20	0.250	1	Hrt1994	1.6	0.006
1993.0925	272.60	0.253	1	Hrt2000a	0.5	0.008
1994.2207	274.50	0.253	1	Hrt1997	0.9	0.007
1995.1492	276.00	0.257	1	Hrt1997	1.3	0.010
1996.1808	276.00	0.261	1	Hrt2000a	0.0	0.013

WDS 08277-0425 = ADS 6825 = A 550 = HIP 41489						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1903.04	190.1	0.160	2	A	8.1	0.014
1910.25	174.4	0.160	2	A	13.6	0.011
1920.14	204.1	0.140	3	A	2.1	0.047
1923.33	180.7	0.150	3	A	-4.7	0.012
1932.33	154.5	0.170	3	B	-3.5	0.027
1933.61	142.6	0.160	6	B	-10.6	0.029
1934.91	147.8	0.170	4	V	0.8	0.056
1936.78	137.	0.140	8	B	4.1	0.060
1941.25	198.	0.120	1	B	-5.1	0.029
1944.26	194.0	0.160	3	VBs	7.4	0.024
1944.88	187.5	0.170	5	V	3.2	0.029
1946.45	180.8	0.180	4	B	1.7	0.028
1950.34	182.2	0.140	2	VBs	14.2	-0.018
1951.36	162.8	0.164	2	Fin1951b	-2.5	0.009
1952.29	163.0	0.171	2	Fin1953d	0.5	0.020
1952.72	166.3	0.140	7	VBs	5.4	-0.009
1953.29	158.0	0.140	3	Fin1953d	-1.2	-0.005
1954.34	157.3	0.138	4	Fin1954c	1.8	0.002
1955.84	148.3	0.123	1	Fin1956a	-0.4	0.005
1956.29	139.5	0.123	1	Fin1956a	-6.8	0.011
1961.32	198.7	0.111	1	Fin1962a	-18.8	0.049
1962.33	197.4	0.121	5	Fin1963a	-7.1	0.033
1964.329	196.7	0.138	6	Fin1965a	5.1	0.016
1965.325	188.6	0.151	4	Fin1966a	1.3	0.017
1966.22	147.	0.160	1	B	-37.0	0.018
1972.00	165.8	0.140	2	Wor, 1 VBs	-1.1	-0.017
1976.3010	332.5	0.125	1	McA1978b	0.1	-0.003
1976.8578	331.7	0.122	1	McA1978b	1.9	0.001
1976.9234	330.9	0.127	1	McA1979a	1.4	0.007
1977.1800	324.9	0.114	1	McA1982b	-3.3	-0.003
1978.1465	323.0	0.104	1	McA1980b	0.5	0.002
1980.1589	297.3	0.056	1	McA1983	-1.5	0.000
1982.8550	208.0	0.064	1	Tok1983	-4.6	-0.007
1986.8895	185.7	0.137	1	McA1989	-0.4	0.000
1989.9391	176.8	0.155	1	Hrt1993	0.5	-0.001
1989.9446	175.6	0.158	1	Hrt1993	-0.6	0.002
1990.2755	173.3	0.151	2	Hrt1992b	-2.0	-0.006
1990.3461	176.5	0.161	2	Hrt1993	1.4	0.003
1990.9138	173.8	0.160	1	Hrt1996b	0.3	0.001
1991.25	171.0	0.158	1	HIP1997a	-1.5	-0.001
1991.9052	170.9	0.159	1	Hrt1994	0.2	0.000
1993.0925	167.6	0.160	1	Hrt2000a	0.3	0.002
1994.2207	164.2	0.153	1	Hrt1997	0.1	-0.001
1994.3132	164.6	0.154	1	Hrt1996b	0.8	0.001
1996.1808	157.7	0.140	1	Hrt2000a	0.0	-0.001
1996.8666	155.7	0.132	1	Hrt2000a	0.5	-0.003

WDS 17471+1742 = ADS 10795 = STF 2215 = HIP 87044						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1831.5300	310.60	0.750	7	STF	0.3	-0.078
1841.5600	311.60	0.860	4	OSTF	3.5	0.037
1855.9200	304.60	0.670	3	Se	-0.3	-0.143
1868.7500	302.80	0.870	5	Sigma	0.9	0.068
1876.2200	300.20	0.930	3	Sp	0.1	0.136
1879.6000	298.40	0.770	3	Hl	-0.9	-0.021
1884.0400	300.30	0.790	6	Per	2.0	0.005
1892.6400	295.50	0.710	11	Sp	-0.6	-0.064
1901.0500	294.00	0.700	2	A	0.0	-0.062
1902.4400	296.30	0.710	3	Hu	2.7	-0.050
1902.5700	296.00	0.690	2	Beta	2.4	-0.070
1906.5400	298.80	1.460	1	Ino	6.2	0.707
1906.9400	291.10	0.770	17	Frm1,Doo4,GrO9,Dob3	-1.3	0.017
1910.5900	289.30	0.710	5	Vdk1,J1,Wz3	-2.2	-0.036
1913.2000	286.90	0.660	15	GrO	-3.9	-0.082
1922.7700	286.20	0.690	13	Chan2,GrO4,B4,Mag3	-1.9	-0.034
1924.8100	289.00	0.770	8	Prz2,Dob4,Plq2	1.5	0.050
1932.6560	283.90	0.700	3	GSigma	-1.3	-0.003
1942.3200	280.30	0.800	3	Voute	-1.9	0.119
1945.4700	280.00	0.660	4	VBs	-1.2	-0.013
1948.5980	275.64	0.722	6	Rabe	-4.5	0.057
1950.5970	276.05	0.718	6	Rabe	-3.4	0.058
1950.7120	280.80	0.540	1	Markowitz	1.4	-0.120
1951.7200	280.40	0.560	1	Markowitz	1.3	-0.097
1952.5800	274.72	0.765	6	Rabe	-4.0	0.110
1953.5400	280.30	0.570	3	VBs	1.9	-0.082
1954.4860	275.00	0.620	3	Dju	-3.1	-0.030
1954.7030	273.79	0.789	7	Rabe	-4.2	0.140
1954.7300	277.60	0.650	4	Baize	-0.4	0.001
1955.6200	273.30	0.640	3	Muller	-4.4	-0.007
1955.6310	273.26	0.747	6	Rabe	-4.4	0.100
1956.2960	275.30	0.610	2	Camichal	-2.1	-0.035
1957.6200	277.10	0.660	3	Wor	0.1	0.019
1958.3480	279.50	0.790	1	Bos	2.8	0.151
1958.4410	278.00	0.520	1	Bos	1.3	-0.119
1958.6490	278.50	0.630	1	Bos	1.9	-0.008
1959.6600	275.40	0.570	7	GrO	-0.8	-0.065
1961.6960	279.20	0.610	4	Bos	3.7	-0.020
1961.8100	274.80	0.650	5	Hz	-0.6	0.021
1962.4060	273.70	0.650	4	Bos	-1.5	0.022
1963.4130	274.30	0.660	4	Wor	-0.5	0.035
1963.4140	274.30	0.660	4	Wor	-0.5	0.035
1964.4500	274.50	0.610	3	Couteau	0.1	-0.012
1966.4330	271.50	0.550	1	Walker,Jr.	-2.1	-0.066
1967.4250	272.20	0.510	4	Walker,Jr.	-1.1	-0.103
1968.6900	274.30	0.610	4	Bz	1.5	0.001
1969.5660	269.40	0.500	4	Walker,Jr.	-3.0	-0.106
1971.5180	271.50	0.580	4	Walker,Jr.	-0.1	-0.020
1973.5380	271.60	0.650	4	Wor	0.8	0.056
1975.5000	270.70	0.610	4	Hz	0.8	0.022
1977.5300	268.10	0.520	2	Walker,Jr.	-0.9	-0.061

WDS 17471+1742 = ADS 10795 = STF 2215 = HIP 87044						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1978.3169	269.10	0.575	1	McA1984b	0.4	-0.004
1978.6174	268.50	0.575	1	McA1980b	-0.1	-0.003
1978.6960	270.90	0.580	1	Pop	2.4	0.002
1979.1905	268.00	0.577	1	McA1984b	-0.3	0.001
1979.3626	268.00	0.573	1	McA1982d	-0.2	-0.002
1979.5319	268.10	0.573	1	McA1982d	-0.1	-0.002
1980.4767	267.80	0.580	1	McA1983	0.1	0.008
1980.4821	268.10	0.574	1	McA1983	0.4	0.002
1980.6620	270.60	0.470	4	Wor	3.0	-0.101
1980.7226	266.90	0.583	1	McA1983	-0.7	0.012
1981.4569	266.70	0.571	1	McA1984a	-0.6	0.002
1981.4677	265.20	0.563	1	McA1984a	-2.1	-0.006
1981.4732	266.60	0.570	1	McA1984a	-0.7	0.001
1981.7000	266.70	0.571	1	McA1984a	-0.5	0.003
1982.2870	267.10	0.551	1	McA1997	0.2	-0.015
1982.2888	265.80	0.547	1	McA1997	-1.1	-0.019
1982.5192	268.70	0.544	1	McA1997	1.9	-0.021
1983.4255	266.10	0.564	1	McA1987b	-0.3	0.002
1983.6360	266.40	0.570	1	McA1997	0.1	0.009
1983.6387	266.40	0.573	1	McA1997	0.1	0.012
1983.7343	266.10	0.575	1	McA1997	-0.1	0.014
1984.3567	265.90	0.564	1	McA1996a	0.0	0.005
1984.3593	266.20	0.562	2	McA1996a	0.3	0.003
1984.3622	266.00	0.566	2	McA1996a	0.1	0.007
1984.3666	268.10	0.576	1	Bag1985	2.2	0.017
1984.4441	265.80	0.567	2	McA1996a	-0.1	0.008
1984.4468	266.00	0.564	2	McA1996a	0.1	0.005
1984.4496	266.20	0.566	2	McA1996a	0.3	0.007
1984.4523	266.00	0.567	2	McA1996a	0.1	0.008
1985.2549	265.50	0.558	1	McA1996a	0.0	0.002
1985.4161	265.70	0.556	1	McA1996a	0.3	0.000
1985.4188	265.90	0.558	1	McA1996a	0.5	0.003
1985.4215	265.50	0.556	1	McA1996a	0.1	0.001
1985.4869	265.50	0.562	1	McA1987b	0.1	0.007
1985.5203	265.50	0.563	1	McA1987a	0.1	0.008
1985.6591	265.10	0.560	2	McA1996a	-0.2	0.005
1985.6729	265.50	0.557	2	McA1996a	0.2	0.002
1986.2734	264.80	0.562	1	McA1997	-0.2	0.009
1986.2760	264.60	0.557	1	McA1997	-0.4	0.004
1986.3000	268.00	0.500	4	Wor	3.0	-0.053
1986.4045	265.20	0.561	1	McA1989	0.3	0.009
1986.4564	264.90	0.566	1	McA1997	0.0	0.014
1986.4618	265.20	0.560	1	McA1997	0.3	0.008
1986.4891	265.50	0.565	1	McA1997	0.6	0.013
1986.6536	265.50	0.562	1	Bag1989a	0.7	0.011
1987.2699	265.30	0.559	1	McA1989	0.8	0.010
1987.2837	264.70	0.557	1	McA1997	0.2	0.008
1987.2919	264.90	0.557	1	McA1997	0.4	0.008
1987.2946	264.40	0.565	1	McA1997	-0.1	0.016
1987.4558	264.60	0.561	2	McA1997	0.2	0.012
1987.5486	264.80	0.554	2	McA1997	0.4	0.006
1987.5513	264.80	0.553	1	McA1997	0.4	0.005

ORBITS FOR SIXTEEN BINARIES

WDS 17471+1742 = ADS 10795 = STF 2215 = HIP 87044						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1988.2583	265.00	0.549	1	McA1989	1.0	0.003
1988.5590	261.50	0.620	2	Zul	-2.4	0.075
1990.2653	263.60	0.550	1	Hrt1992b	0.6	0.011
1991.2500	263.00	0.545	1	HIP1997a	0.5	0.009
1991.3275	262.60	0.548	1	Hrt1994	0.1	0.013
1991.4700	260.20	0.440	1	TYC2002	-2.2	-0.095
1991.4840	263.50	0.550	1	WSI1997	1.1	0.015
1991.5390	261.10	0.520	1	WSI1997	-1.3	-0.015
1991.5420	261.10	0.480	1	WSI1997	-1.3	-0.055
1991.6670	263.90	0.520	1	WSI1997	1.6	-0.014
1991.6840	262.30	0.540	1	WSI1997	0.0	0.006
1992.3900	260.90	0.536	1	Hor1994	-1.0	0.004
1993.2058	261.70	0.545	1	Hrt1994	0.2	0.016
1994.7079	261.40	0.538	1	Hrt2000a	0.7	0.014
1995.3167	260.70	0.529	1	Hrt1997	0.3	0.007
1995.5800	259.90	0.530	1	WSI1999b	-0.3	0.009
1996.3242	260.80	0.526	1	Hrt2000a	1.0	0.008
1996.5289	259.90	0.525	1	Hrt2000a	0.2	0.008
1996.6510	259.90	0.520	1	WSI1999b	0.3	0.003
1996.6510	257.80	0.530	1	WSI1999b	-1.8	0.013
1996.6720	259.60	0.510	1	WSI1999b	0.0	-0.007
2002.5090	256.80	0.510	1	WSI2004	0.6	0.014

WDS 18025+4414 = ADS 11010 = BU 1127 Aa,B = HIP 88350						
t	θ	ρ	n	Obs.	$\Delta\theta$	$\Delta\rho$
1889.5300	144.70	0.800	3	beta	-1.2	0.035
1895.6500	147.40	0.860	3	A	7.4	0.060
1897.7100	130.50	0.880	3	A	-7.7	0.069
1898.6100	139.60	0.740	1	Bowyer	2.2	-0.075
1898.7700	141.40	0.700	3	Lewis	4.1	-0.116
1905.3800	133.80	0.870	4	Doo	2.1	0.025
1912.1000	132.10	0.790	6	GrO	5.8	-0.079
1923.4900	113.20	0.990	3	Fox	-4.6	0.091
1924.9800	119.90	1.030	3	GrO	3.2	0.128
1930.8000	111.70	0.930	6	GrO3,Bonnet3	-0.9	0.019
1935.6600	110.20	0.950	5	Rabe	1.0	0.033
1936.6400	104.70	1.070	3	Bz	-3.8	0.152
1937.7100	107.20	1.070	4	Rabe	-0.6	0.152
1942.6500	104.20	0.840	5	Duruy4,Arend1	-0.2	-0.081
1944.3800	98.90	0.970	3	Voute	-4.3	0.049
1946.5400	99.50	0.610	2	Arend	-2.2	-0.312
1947.5200	98.80	0.960	5	Bz	-2.2	0.038
1950.6870	97.20	0.720	2	Markowitz	-1.6	-0.201
1951.6530	96.20	0.820	2	Wilson,Jr.	-2.0	-0.101
1952.9400	96.40	0.890	2	VBs	-0.9	-0.030
1956.3200	93.10	0.950	9	Wor3,Bz3,B3	-1.8	0.032
1959.6900	89.60	1.080	4	Wor	-3.0	0.164
1960.4700	94.30	0.940	2	Cou	2.3	0.025
1961.5100	90.00	0.950	4	hz	-1.3	0.036
1962.5600	91.20	0.720	3	Holden	0.6	-0.193
1962.7000	89.30	0.880	4	VBs	-1.2	-0.033
1962.7100	89.40	1.010	3	Bz	-1.1	0.097
1964.5500	87.80	1.060	5	hz	-1.4	0.149
1967.5200	86.20	0.940	3	Cou	-0.9	0.033
1969.3930	86.50	0.820	1	Pop	0.8	-0.084
1969.3960	88.50	0.800	1	Zul	2.8	-0.104
1972.6030	86.20	0.960	4	Wor	2.8	0.061
1973.6130	82.70	0.930	4	Walker,Jr.	0.0	0.032
1975.5400	83.90	0.820	1	Ole	2.6	-0.074
1975.5420	82.10	0.740	1	Pop	0.8	-0.154
1975.7200	83.70	0.890	1	Zul	2.5	-0.004
1978.2160	86.50	0.900	3	Wor	7.2	0.010
1980.4900	83.50	0.920	2	hz	5.9	0.035
1983.5610	74.80	0.910	2	Zul	-0.5	0.031
1984.3839	73.70	0.872	1	Hrt2000a	-1.0	-0.005
1985.5020	76.00	0.850	2	Pop	2.1	-0.025
1989.4850	73.00	0.810	1	Pop	2.2	-0.056
1989.5230	69.70	0.990	2	Zul	-1.1	0.124
1991.2500	69.20	0.868	1	HIP1997a	-0.2	0.007
1991.6600	69.40	0.885	1	TYC2000a	0.3	0.025
2000.5400	61.70	0.820	2	WSI2001b	-0.2	-0.018
