Catalogue of the field contact binary stars

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Abstract. The catalogue of 361 galactic contact binaries is presented. Enlisted contact binaries are divided into five groups according to the type and quality of the available observations and parameters. For all systems the ephemeris for the primary minimum, minimum and maximum visual brightness and equatorial coordinates are given. If available, photometric elements, $(m_1 + m_2)\sin^3 i$, spectral type, parallax and magnitude of the O'Connell effect are also given. Photometric data for several systems are augmented by new observations. The quality of the available data is assessed and systems requiring modern light-curve solutions are selected. Selected statistical properties of the collected data are discussed.

Key words: contact binaries - photometry - orbital period

1. Introduction

Eclipsing binaries of the W UMa type are systems with components sharing common envelope located between the inner and outer critical surface in the Roche model. Most systems have components of later spectral type (usually between F and K), nearly equal surface temperatures and the mass ratios usually between $q = m_2/m_1 \approx 0.2$ - 0.5. Since the amplitude of the light-curve (hereafter LC) decreases with decreasing mass ratio, the lower limit is unsure. The most extreme mass-ratio systems are difficult to detect. The present record holder is SX Crv $q = 0.066$ (Rucinski et al., 2001). Fortunately, the light of W UMa binaries varies continuously during the orbital cycle making the interval of the inclinations, for which eclipses occur, quite large (see Fig. 3 of Mochnacki & Doughty, 1972). Hence, the probability of their discovery is higher than in detached systems. The LCs of most contact systems can be successfully explained by the common-envelope model, first introduced by Lucy (1968). According to the gravity darkening law

$$T_{local} \propto g_{local}^{\beta} \tag{1}$$

the local temperature is proportional to the local gravity. Usually it is assumed $\beta \approx 0.08$ for radiative envelopes and $\beta \approx 0.25$ for convective envelopes. Hence, the more massive component (having larger surface gravity) should have slightly higher temperature. This is observed only for smaller part of the systems (A type according to the Binnendijk, 1970 classification). The rest of the systems (W type) belongs to the opposite case (more massive component cooler). For the total or nearly total eclipses, the system can be reliably classified from the width and the shape of the eclipse. For partial eclipses, the type of the system can be inferred from LC and radial-velocity measurements. For A-type systems the primary minima (deeper eclipses) correspond to the transit of the smaller component, for W-type systems the primary minimum is occultation. Although visual LCs of the W-type systems are being successfully solved by decoupling of the temperatures of the components (e.g., in Wilson & Devinney, 1971 code) this approach is inadequate in the far ultraviolet (see Eaton et al., 1980). Most accepted explanation of the W-type syndrome was set forth by Mullan (1975), who introduced cool starspots on the primary component. This possibility is supported by phenomena connected with spot activity: increased H_α emission, fast rotational velocity, flare events from X-ray to radio as well as LC disturbances seen preferably in the W-type systems. The circumstellar matter can affect the form of the LC, too, at least in some systems.

Due to the fact that components of a contact binary are formed from almost normal, hydrogen-core-burning stars obeying mass-radius relation for main-sequence stars, the surface temperature of a contact binary depends on the orbital period. This, so called period-colour relation, first noticed by Eggen (1967) is important tool for the contact-binary research. According to Wang (1994)

$$(B-V)_0 = 0.062 - 1.31 \log P, \tag{2}$$

where $(B-V)_0$ is the intrinsic colour index a P is the orbital period in days.

A separate group of the contact binaries is formed by hot stars of OB spectral types, where the common envelope is radiative (see Figueiredo et al., 1994). For more detailed review and the status of the contact-binary research the reader is referred to papers of Rucinski (1993), Maceroni & van't Veer (1996).

The number of eclipsing binaries displaying the W UMa-type LC (EW) is quickly increasing. While the 4th edition of the General Catalogue of the variable stars listed 561 objects as EW variables, its 4.1 electronic edition includes as many as 715 such variable stars. Most of them have only scanty observations. Part of them are members of galactic clusters. The group of contact type binaries is extended mainly by the OGLE experiment (Rucinski, 1997a, 1997b), ROTSE CCD survey (Akerlof et al., 2000), MISAO [1], EINSTEIN X-ray survey (Fleming et al., 1989) and Hipparcos mission (ESA, 1997). The Hipparcos satellite also provided LCs and minima times of many neglected southern contact systems

[1] see `http://www.info.waseda.ac.jp/ muraoka/members/seiichi/misao/`

(for 1991) as well as parallaxes used by Rucinski & Duerbeck (1997) to derive the absolute magnitude calibration of contact binaries:

$$M_{\rm v}^{\rm cal} = -4.44 \log P + 3.02(B-V)_0 + 0.12, \tag{3}$$

where the orbital period P is in days.

The photometric data available for W UMa variables are being recently augmented by high-quality radial velocities obtained mainly at the David Dunlap Observatory (Lu & Rucinski, 1999, Rucinski & Lu, 1999, Lu et al., 2001, Rucinski et al., 2000, 2001, 2002). While the number of systems with reliable light and radial velocity solutions based on the Roche geometry was lower than 40 in 1996 (Maceroni & van't Veer, 1996) the present catalogue lists as many as 92 systems. The presence of the third light in the photometric LC solutions, apparent orbital period changes due to the light-time effect as well as the presence of the additional spectral lines using the high-dispersion spectroscopy (see Hendry & Mochnacki, 1998) have shown that many contact binaries are members of multiple systems.

Since the number of known contact binaries is quickly increasing the catalogue lists systems found up to March 01, 2002.

2. New observations

To extend available data, new observations were obtained for systems with no ground-based photometry available (DN Cam, FN Cam, OU Ser, EX Leo, FI Boo) and several neglected systems (EP And, EQ Tau, AH Aur, CW Cas, GW Cep, V714 Mon). Part of the data have already been published (Pribulla et al., 2001, 2002b, Pribulla & Vaňko, 2001, 2002, Vaňko & Pribulla, 2001, Vaňko et al., 2001). Unpublished minima observed since March 2001 were used to update the ephemerides of AB And, BX And, EP And, V402 Aur, DU Boo, DN Cam, GW Cep, VW Cep, SW Lac, AW UMa, EQ Tau, TX Cnc, V714 Mon, WZ Cep, V857 Her, YY CrB, AH Tau, V432 Per, RW Com, U Peg. The minima will be published in IBVS in autumn 2002. The $UBVR$ photoelectric photometry was performed at the Stará Lesná (SL) and Skalnaté Pleso (SP) observatories of the Astronomical Institute of the Slovak Academy of Sciences (for details on instrumentation and reduction see Pribulla et al., 2001). Times of the minima were determined by the Kwee & van Woerden, sliding integrations, center of mass and parabola fitting methods using *min77* code (Komžík, 2001).

3. Sources and structure of the catalogue

The main source of the catalogue is the improved GCVS 4.1 electronic edition [2] and recent issues of IBVS (systems not included in GCVS 4 (Kholopov et al.,

[2]`ftp://cdsweb.u-strasbg.fr/pub/cats/II/214A`

1985)). Another valuable source of the systems and cross-identifications was the SIMBAD astronomical database [3]. The references to the cataloged objects were found using the ADS database [4]. The Hipparcos discoveries were excerpted from ASCII CD-ROMs (Volume 17) of the Hipparcos Catalogue (ESA, 1997).

In the first step, the systems with EW LC were inspected. Part of the low-amplitude systems classified as the eclipsing binaries of the W UMa LC were found in the recent literature as the RR Lyrae or δ Scuti pulsating stars (e.g., EF Cnc, CI Com, V939 Cyg, V945 Oph, VW CVn etc.) the opposite cases were also found (DN Aur, V802 Aql, IT Her, V842 Her etc.). The catalogue does not list members of the galactic clusters displaying EW LC since these systems are quite faint and the classification is uncertain. Exceptions are EP Cep and ER Cep with LC solutions available. Systems included into our catalogue were also chosen from new variables detected during the Hipparcos mission and denoted as showing EB LC (ESA, 1997), since the βLyrae classification was often inferred from one erroneous observation in either of the minima. Problematic is the inclusion of several low-amplitude systems (e.g., CT Cet, V386 Pav, CP Hyi, HN UMa etc.) with the periods and $(B-V)$ colours typical for contact systems (for discussion see Duerbeck, 1997).

The important clue as to the contact binary nature is the colour index which for W UMa binaries (at odds with pulsating stars) varies only very weakly with the orbital phase. The reliable classification of some low-amplitude variable stars is impossible without spectroscopic observations.

The present version of the catalogue lists 361 objects. We included all systems with CCD or photoelectric LC available or/and reliable spectroscopic data (277 objects, groups 1-4). Other objects (group 5) are mainly Hipparcos discoveries (41 systems) and systems with good photographic LC or reliable ephemeris.

4. Description of the catalogue

The following subsections describe individual parameters included into the catalogue in the column order.

4.1. Name of the object

In the first column of both right and left halves of the Table 1 the **name** of the object in the GCVS notation is given. For recent discoveries we used the last, 76th namelist of the variable stars, published in July 2001 (Kazarovets et al., 2001). For variables without definite GCVS name we used the following designations : V1 Aqr = GSC 5178-1376 (hereafter "GSC" omitted), V1 Aql = 5728-92, V1 Ari = 628-290, V1 Aur = 3376-287, V1 Boo = 2016-830, V2 Boo = 2022-79, V3 Boo = 2020-736, V4 Boo = 2020-873, V1 Cam = 4344-123, V1

[3] `http://simbad.u-strasbg.fr`
[4] `http://adsabs.harvard.edu/abstract_service.html`

CVn = 2530-488, V1 CMi = 4832-400, V1 Com = 1991-1390, V2 Com = 1991-1633, V1 Cyg = 3547-216, V2 Cyg = 3921-1531, V3 Cyg = 3551-81, V4 Cyg = 3564-3059, V1 Her = 3073-837, V2 Her = 2604-1671, V3 Her = 3094-120, V4 Her = 3099-905, V5 Her = 3100-1616, V6 Her = 2625-1563, V1 Lib = 5582-545, V1 Lyr = 2636-1753, V2 Lyr = 3131-476, V3 Lyr = 2646-1938, V4 Lyr = 3123-1618, V1 Mon = 752-2349, V1 Peg = 1172-1452, V1 Psc = 1193-972, V2 Psc = 608-143, V1 Sge = 1621-2192 and V1 Sex = 4917-22. Two stars, not icluded in the GSC catalogue but denoted on the CCD frames of the original paper are V31 and V32 Cam.

Asterisk after the name of the objects indicates remark following the table.

4.2. Type of the eclipses and classification of the object

Column **Type** gives the classification of the system according to its LC characteristics and relative temperatures of the components.

The systems are classified according to the Binnendijk (1970) scheme: the systems with the primary minimum being the transit are of the A type, systems with the primary minimum being the occultation are of the W type. Contact binaries with hot components of the OB spectral types are assigned as E type. Systems in which the components are in physical but not in thermal contact (represented by W Crv) are denoted by B (reminding β Lyrae LC).

The type of the eclipses is also given: P = Partial, T = total. For systems which do not clearly show the interval of the constant light during the eclipse of the smaller component, the type of the eclipse is inferred from the geometrical elements. The smallest orbital inclination for which the system is total is the function of the mass ratio and fill-out parameter. The presence of the total eclipses in the system is important for the assessment of the quality of the geometric elements inferred from photometric observations. The mass ratio can be reliably determined only for totally eclipsing pairs (see Mochnacki & Doughty, 1972). Unfortunately, the presence of the third light can affect the determination of the mass ratio in totally eclipsing systems (e.g., EF Dra, Pribulla et al., 2001).

For instance, entry WT means that the system is of the W subtype according to the Binnendijk's scheme and the eclipses are total.

4.3. Group - column G

In present catalogue the contact binary stars are divided into five groups depending on available data (column **G**): (1) systems with both spectroscopic and photometric orbits, (2) systems without reliable photometry but with spectroscopic orbit, (3) systems with photometric orbit, (4) systems with unsolved photoelectric or CCD LC, (5) systems without good CCD or photoelectric LC but with frequent observations of minima which allowed to determine reliable ephemeris. Most of the systems coming into the second subgroup are Hipparcos discoveries for which reliable spectroscopy has been performed at the DDO.

Table 1. Availability of the selected parameters for all five groups (G1 - G5) of systems. * means that parameter is available for part of the systems

Parameter	G1	G2	G3	G4	G5
Type of the system (AWEB+PT)	+	*	*	*	-
Ephemeris	+	+	+	+	+
No. of available pe or CCD minima (n)	+	+	+	+	+
Photometric mass ratio q_{ph}	+	−	+	−	−
Fill-out f	+	−	+	−	−
Inclination i	+	−	+	−	−
Temperatures $T_{1,2}$	+	−	+	−	−
$\Delta M = V^{II}_{max} - V^{I}_{max}$	+	−	*	*	−
Spectroscopic mass ratio q_{sp}	+	+	−	−	−
$(m_1 + m_2)\sin^3 i$	+	+	−	−	−
Spectral type	+	+	*	*	−
$\alpha_{2000}, \delta_{2000}$	+	+	+	+	+
V_{max}, V_{min}	+	+	+	+	+

The photometric elements for most systems were determined assuming Roche geometry (for the discussion see Maceroni & Van't Veer, 1996). The photometric elements of some systems of the third subgroup are just preliminary solutions performed by authors of original papers using the code Binary Maker 2.0 of Bradstreet (1993).

Table 1 gives the review of the parameters available for the systems in these groups.

4.4. Ephemeris of the system - columns $\mathbf{JD_0^{hel}}$, Period, n, N1

The ephemeris for the primary minimum ($\mathbf{JD^0_{hel}}$ and **P**) is given for all systems. The JD^0_{hel} was recomputed to correspond to the last photoelectric or CCD minimum available. The ephemerides of most systems from the first group were determined fitting the data in the last section of the (O-C) diagram which is approximately linear. For most systems the comprehensive lists of the minima were taken from Kreiner et al. (2001). The minima were weighted according to Kreiner et al. (2001): visual w = 1, photographic and photovisual w =3, CCD w = 5, photoelectric w = 10. For the systems of the Group 5 (and some from groups 1 and 3) there were no recently available times of minima. Hence the ephemeris was taken from GCVS 4 or from other source. Ephemerides presented for group 2 are determined from original spectroscopic conjunctions and Hipparcos ephemerides.

n means the number of photoelectric and CCD minima available.

For objects with reasonably long interval of observations the type of the observed period change is also indicated. In some systems the changes are caused by the light-time effect (hereafter LITE) due to the presence of other component(s) in the system. Surface activity (and resulting variable asymmetry of the minima) of several systems is other possible cause of the observed period variations. Circumstellar matter, mass transfer or/and mass loss can also play an important role in many systems.

Ephemerides for several systems (UZ CMi, V731 Her, V873 Aql, BK Vul, V344 Lac, V700 Cyg etc.) given in GCVS4 were found to be spurious. The problematic are also ephemerides of BI Vul, BP Vul, V400 Lyr, EK Com, IT Her, VZ Lib, FM Vel, V1193 Cyg, V732 Her, VY Cru, MS Her and V676 Aql. Future observations are necessary to find the true orbital periods.

The catalogue also lists variable stars denoted as pulsating variables in the Hipparcos Catalogue but reclassified (according to the period-colour diagram) later by Duerbeck (1997). Since original period is a half of the true period and JD_0 gives the instant of the maximum we recomputed ephemerides by adding half of the original period to the epoch of the maximum. However, there is still ambiguity which minimum is the primary. Space motions, parallaxes, and spectroscopic investigations are needed for a definite classification of these systems.

For all four groups of contact binaries note 1 (column head **N1**) regards observed orbital period change:

v	orbital period is variable,
v!	fast or complicated variation of the orbital period,
3b	orbital period is modulated by the LITE,
3b?	orbital period is probably modulated by the LITE,
:	uncertain or spurious period,
::	very uncertain or unreliable period.

4.5. Photometric elements - columns $\mathbf{q_{ph}}$, f, i, $\mathbf{T_1}$, $\mathbf{T_2}$, ΔM, N2

The photometric elements for the systems in groups 1 and 3 were taken from the literature. The geometry of a contact binary is given only by the mass ratio $\mathbf{q_{ph}}$, inclination **i** and fill-out factor **f**:

$$f = \frac{\Omega - \Omega_{inn}}{\Omega_{out} - \Omega_{inn}}, \tag{4}$$

where Ω_{inn} and Ω_{out} correspond to the inner and outer critical surface, respectively. Ω is the surface equipotential of the system. The mass ratios $q = m_2/m_1$ are always ≤ 1 since the more massive component (even if cooler) is denoted as the primary. Apart from the geometric elements the temperatures of the components $\mathbf{T_1}$ and $\mathbf{T_2}$ are also given. The code used for the determination of the photometric elements is indicated in the column **N2**.

The following abbreviations were used:

WD	various versions of the W&D program (see Wilson & Devinney, 1971),
L2	Light2 software (Hill & Rucinski, 1993),
LT	Light software (Hill, 1979),
BM	Binary Maker 2.0 (Bradstreet, 1993),
W3	WUMA3 code (Rucinski, 1976),
WDp	Adapted W&D code using the Price algorithm (see Barone et al., 1993), grid search or genetic algorithms
WDr	W&D code taking into account radiation pressure (see Drechsel et al., 1994)
BS	BINSYN code (see Vinkó et al., 1996) using the Price algorithm
ME	Maximum entropy mapping (see Hendry & Mochnacki, 2000)
DJ	Djurasević's (1992a, 1992b) code
EL	Wood's (1972) ellipsoidal model
KO	Kopal's (1982ab) Fourier analysis method

Most LCs were solved using the 1992 version of the W&D code, the 1995 version in not much widespread. There are also many "improved" versions of the W&D code e.g., using the Price Algorithm (Barone et al., 1993). The LIGHT2 code is made up of two programs WUMA3 and LIGHT (see Hill & Rucinski, 1993). All these codes are based on the Roche geometry and its consequences (for details regarding LC fitting codes see Kallrath & Milone, 1999). The solution of the Wood (1972) ellipsoidal model was given for AZ Vir and HT Vir. For V829 Her the photometric elements were determined using broadening function and LC fitting method (Lu & Rucinski, 1999). Elements of UX Eri are determined by adapted Russell-Merill method (Mauder, 1972). The LC of AM Leo was solved by the Roche model based program of Binnendijk (1977). For GSC 4344-123 the parameters were computed using the NIGHTFALL program (see also Covino et al., 2000).

An additional parameter "s" denotes objects were a simultaneous fit of the radial velocities and LCs has been performed; this includes cases were LCs were solved using the spectroscopic mass ratio q_{sp}.

The magnitude of the O'Connell effect (column head $\mathbf{\Delta M}$ was taken either from Maceroni & van't Veer (1996) or from original papers. For some systems the magnitude and sign of the O'Connell effect $\Delta M = V^{II}_{max} - V^{I}_{max}$ changes; the value usually refers to the highest observed asymmetry of the LC.

4.6. Spectroscopic data - columns $\mathbf{q_{sp}}$, $\mathbf{M^*}$, sp.

If available the present catalogue gives spectroscopic mass ratio $\mathbf{q_{sp}}$ (always $\leq$1) and $(m_1 + m_2)\sin^3 i$ denoted in the catalogue as $\mathbf{M^*}$. For several systems only the semi-amplitude of the radial-velocity variations of the primary component has been published (see Batten et al., 1989). This regards S Ant, AK Her and TY Pup. The spectral type of the primary component is also given (column **sp**).

4.7. Other parameters - columns $\alpha_{2000}, \delta_{2000}, \pi, \sigma_\pi, \mathbf{V_{max}}, \mathbf{V_{min}}, \mathbf{Ref.}, \mathbf{N3}$

Some parameters were taken from other catalogues. Equatorial coordinates (columns α_{2000} and δ_{2000}) were taken from the SIMBAD database [5]. Parallaxes π and their standard errors σ_π in miliarcseconds [mas] are given only for the systems observed by the Hipparcos satellite (ESA, 1997). The maximum $\mathbf{V_{min}}$ and minimum $\mathbf{V_{min}}$ visual magnitudes of most systems are taken from the GCVS 4.1 (electronic version).

Column (denoted as **N3**) gives additional information regarding particular system:

- *H* Hipparcos discovery,
- *R* ROTSE discovery,
- *mv* member of the visual pair (at least triple system),
- *ms* third or multiple components to the system found in the spectra,
- *A* unsure equatorial coordinates of the system (uncertainty larger than $0.1'$)

The last column **Ref.** gives the references to the object. Usually one reference regards photometry and one spectroscopy. The catalogue is available in the electronic form at `http://www.ta3.sk/ pribulla/contact.html`

5. Discussion and conclusions

The catalogue contains information for the field contact binary stars. It brings the view on the range and the completeness of the study of these systems. The catalogue can be helpful for the investigators who prepare the program for various observing campaigns or study the individual systems in more detail.

Some systems were classified as KE and defined in the GCVS as "contact systems of early (O-A) spectral types, both components being close in size to their inner surfaces". According to new observations and computations at least few of them fill their Roche lobes. Therefore, the present classification of the contact binary stars is no more topical.

361 contact binary stars were cataloged. The number of systems with both photometric and spectroscopic data available is 92 (Group 1). There is still 24 systems with reliable spectroscopic orbit but without photometric orbit (Group 2). For 71 systems definite or preliminary photometric orbits were computed (Group 3). CCD or photoelectric LCs were published for 90 systems (Group 4). The catalogue lists also 84 systems without good LC having sufficient number of minima to provide ephemeris (Group 5).

The range of periods of catalogized systems is: 0.22068 days (CC Com) - 1.8855 days (V382 Cyg). The latter being the member of the early-type contact binaries (spectral type of the components O7). The statistics of the period changes can not be done for all systems due to low number of minima. For 34

[5] `http://simbad.u-strasbg.fr`

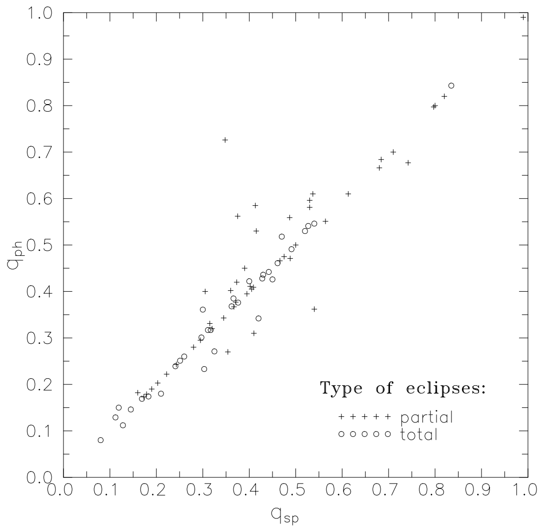

Figure 1. Spectroscopic versus photometric mass ratios for contact binaries in the first group with know type of eclipses (total/partial)

systems with more than 40 photoelectric and CCD times of minima the statistics is as follows: 8 systems show variable period with alternating period increase and decrease, for 12 systems the orbital period increases and for 13 decreases and only in one case (BV Dra) it seems to be constant. The present mass ratio extremes for A-type systems are SX Crv ($q = 0.066$) and V753 Mon ($q = 0.97$) and for W-type systems KR Com ($q = 0.091$) and SW Lac ($q = 0.80$). There are several systems (CC Com, V523 Cas, AO Cam, AC Boo, LS Del, RZ Tau, XZ Leo, CK Boo, etc.) which show large differences between the photometric and spectroscopic mass ratio (see Fig. 1). This is can be partly caused by unreliability of the photometric mass ratios for partially eclipsing systems, possible third light reducing minima depths or low-quality photographic spectroscopy.

The maximum values of the fill-out parameter occur for early-type system CT Tau ($f = 0.98$) and for A-type systems TV Mus ($f = 0.87$), AW UMa ($f = 0.85$) and unreliably classified system AC Boo ($f = 0.91$). Unfortunately fill-out parameter is tightly correlated with the gravity darkening coefficient and therefore cannot be reliably determined.

Table 2. Catalogue of the field binary stars

Name	Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
AB And*	WT	1	51925.218	0.33189106	74	3b?	0.491	0.15	86.8	5450	5821	0	WDs
BX And*	BP	1	51824.9513	0.61011294	66	3b?	0.497	0.08	74.5	6800	4500		L2
CN And	BP	1	50778.5431	0.46279111	65	v	0.450	0.43	70.3	6200	4680	-0.04	WD
EP And	WT	3	52173.4998	0.40411057	6	v	0.340	0.39	80.4	5960	6073	0	WD
GZ And	W	2	48925.6225	0.3050184	16	v							
LO And		4	51761.805	0.38043746	15	v							
QW And		4	50130.6494	0.49188	6	?						-0.04	
QX And	AP	1	47826.0488	0.4118165	5		0.203	0.22	58.6	6500	6421	0	WDs
V376 And	A	2	51510.9415	0.7986733	2								
V395 And		5	48500.4372	0.684656	1								
S Ant	AP	3	35139.9301	0.6483455	2	v	0.871	0.07	68.8	7800	7340	0	WD
EK Aqr		5	50717.4956	0.6129915	1								
EL Aqr	A	2	51498.3063	0.4814063	5								
GK Aqr		5	51363.4796	0.3274149	1								
HV Aqr	AT	1	51775.6418	0.37445772	21		0.146	0.47	78.3	6500			L2
V1 Aqr	B?	4	51463.5725	0.272218	5								
OO Aql	AT	1	51679.76	0.506791	101	v	0.843	0.27	90.0	5700	5635	0.02	WDs
V417 Aql	WT	1	51388.6138	0.37031172	36	v	0.368	0.19	84.5	6030	6256	-0.01	WD
V676 Aql		5	51698.5503	0.5754776	3	:							
V699 Aql		5	51020.8599	0.87689316	3								
V724 Aql		4	50718.3041	0.5175991	12							0	
V784 Aql		5	51799.4299	0.5876937	7							0	
V802 Aql		4	51781.392	0.2677	5							-0.01	
V803 Aql	WP	3	47685.0708	0.26342361	6	v	1.000	0.08	82.9	4600	4594	0	WD
V873 Aql		5	51040.4551	0.3575619	3	:							
V1464 Aql		5	48500.1895	0.697822	1								
V1542 Aql	AW	4	52116.734	0.4175361	9								
V1 Aql		4	51814.642	0.4636	1								
V535 Ara	AT	1	45920.1032	0.62930107	21	v	0.361	0.03	82.1	8750	8572	0	WD
V870 Ara		5	48500.184	0.39978	1								
SS Ari*	WP	1	51928.2589	0.40598363	118	3b	0.295	0.13	75.3	5950	5745	-0.02	WDs
V1 Ari		4	52194.8429	0.381767	1							0	
AH Aur	AT	1	52003.5574	0.4941083	39	v	0.169	0.23	75.5	6215	6141		WDs
AP Aur*	A	3	51249.6687	0.56936983	29	v!	0.246	0.64	75.9	9016	8703	0.03	WD
DN Aur	A	4	49649.258	0.6168891	5		0.210	0.48	77.2	6830	6666	0.05	WD
V402 Aur		4	52224.7685	0.603499	2	:							
V410 Aur	P	5	48500.176	0.36634	1								
V1 Aur	AT	4	51966.464	0.384758	3							0	
44i Boo*	WP	1	51968.559	0.26781916	377	3b	0.559	0.00	72.8	5300	5035	0.05	L2
TU Boo*	AT	3	51338.9058	0.32428229	15	v!	0.498	0.44	87.5	5800	5787	-0.04	WD
TY Boo*	WP	1	51632.802	0.31715045	39	3b?	0.466	0.10	77.5	5469	5834	0.02	WDs
TZ Boo*		4	51292.8128	0.2971655	103	v!							
VW Boo*	BT	1	51314.5548	0.3423181	14	v!	0.428	0.72	76.2	5700	5221	0.01	L2
XY Boo*	AP	1	50942.5836	0.37056752	48	v!	0.182	0.05	69.0	7200	7102	0.02	WD
AC Boo*	WP?	1	51694.447	0.3524411	52	v!	0.310	0.91	82.6				W3
AR Boo	A	3	51320.9079	0.34487396	19	v	0.650	0.00	87.5	6349	6017		WDp
CK Boo*	A	1	50926.6852	0.35515697	44	v!	0.518	0.14	56.6	6400	5685	-0.05	WD
DU Boo	AT?	4	52380.7197	1.0558882	2							-0.1	
EF Boo	W	2	51719.3293	0.42051308	8	v						-0.01	
FI Boo	WP	2	52053.4061	0.3899978	4	:							
V1 Boo		4	52001.4032	0.361112	7								
V2 Boo		4	51996.4139	0.301601	8								
V3 Boo		4	52022.5272	0.384641	6								
V4 Boo		4	51996.584	0.37667	7								
UU Cam		4	48680.6599	0.682544	2	v:						0	
AO Cam	WP	1	51798.7284	0.32990351	26	v	0.585	0.10	75.1	5533	5206	0.01	WDp
CD Cam		4	46170.056	0.76425	1	::							
CY Cam	E	5	48500.293	1.052042	1							0	
DN Cam	W	1	52247.7725	0.4983092	6		0.421	0.50	71.9	6700	6911	0	WDs
FN Cam	AP	1	52445.3977	0.6771318	6		0.222	0.56	72.3	7390	7385	0	WDs
V1 Cam	B?	3	51975.604	0.4341474	13			0.06	74.0			0	

Table 2. (continued)

Name	q_{sp}	M^* [M$_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
AB And*	0.491	1.490	G2V	23:11:32	36:53:35	8.34	1.48	9.50	10.32	129	
BX And*	0.497		F1+K3V	02:09:03	40:47:39	6.6	2.93	8.90	9.57	26	mv
CN And	0.390	1.458	F5V	00:20:31	40:13:34			9.70	10.25	250,229	
EP And				01:42:29	44:45:42			11.90	12.50	223	
GZ And	0.514	1.763		02:12:12	44:40:00			10.83	11.61	174,289	A,mv
LO And				23:27:06	45:34:00			11.20	11.82	8,202	A
QW And				01:18:52	49:43:52			12.60	13.05	285	
QX And	0.203	1.420	F4V	01:57:57	37:48:23			11.25	11.57	195	A,C
V376 And	0.305	2.232	A4V	02:35:12	49:51:37	5.07	0.89	7.68	8.00	251,141	H
V395 And			A0	23:44:32	46:22:49	0.98	1.12	7.57	7.61	78	H,mv
S Ant			A7V	09:32:18	-28:37:40	13.3	0.71	6.40	6.92	181,19	
EK Aqr				23:39:16	-09:09:05			10.80	11.33	6	
EL Aqr	0.203	1.588	F3V	23:47:18	-08:05:12	4.71	1.89	10.49	10.81	251	
GK Aqr				22:19:57	-00:40:36			12.40	13.60	255	A
HV Aqr	0.145	1.472	F5V	21:21:25	-03:09:37			9.71	10.11	250,235	
V1 Aqr				20:48:13	-01:29:26			11.25	11.70	80	
OO Aql	0.835	1.918	G5V	19:48:13	09:18:32			9.20	9.90	130	
V417 Aql	0.362	1.874	F9V	19:35:24	05:50:18	7.65	2.35	11.00	11.50	174,266	
V676 Aql				19:46:36	06:23:42			14.30	14.80	239	A
V699 Aql				19:50:48	07:42:24			13.20	13.80	5	A
V724 Aql			G0	19:56:48	01:06:00	8.21	4.68	11.10	11.57	10,227	A
V784 Aql				20:07:04	13:28:18			14.20	14.80	12	A
V802 Aql				18:58:55	-03:01:12			13.70	14.20	283	A
V803 Aql			K3	19:00:45	-07:29:06			14.00	15.00	267	A
V873 Aql				18:44:58	00:34:12			13.30	14.30	255	
V1464 Aql			A2	19:50:15	-08:36:06	7.16	1.26	8.68	8.75	78	H
V1542 Aql				19:46:25	08:45:12			9.20	9.60	228	
V1 Aql				19:40:08	-10:22:26					232	
V535 Ara	0.300	1.962	A2V	17:38:06	-56:49:17	8.87	0.90	7.17	7.75	161,19	
V870 Ara			F8	18:08:23	-56:46:02	10.01	1.34	9.00	9.39	139	H
SS Ari*	0.295	1.501	G0V	02:04:15	24:00:06			10.37	10.92	172	A
V1 Ari				01:48:44	13:04:12			13.70	14.30	22	
AH Aur	0.169	1.787	F7V	06:26:05	27:59:56	6.18	2.05	10.20	10.70	247,282	
AP Aur*			A2V	07:23:50	36:26:53			10.90	11.40	162	
DN Aur				05:07:57	33:24:12			13.40	13.70	93	
V402 Aur			F2	05:02:15	31:15:49	7.01	1.31	8.84	8.98	210	
V410 Aur				05:01:11	34:30:27	4.77	5.39	10.10	10.44	139	H
V1 Aur				06:32:46	46:23:33			12.73	13.17	89	
44i Boo*	0.487	1.132	G2V	15:03:49	47:39:14	78.39	1.03	5.80	6.40	120,175	mv
TU Boo*			G2V	14:04:59	30:00:00			11.80	12.50	206	A
TY Boo*	0.466	1.637	G5V	15:00:47	35:08:00			10.81	11.47	194	A
TZ Boo*	0.132	0.691	G2V	15:08:09	39:58:13	6.76	1.49	10.41	11.00	15,19	
VW Boo*	0.428	1.269	G5V	14:17:26	12:34:04	3.44	1.90	10.50	11.08	231	A
XY Boo*	0.160	0.879	F0V	13:49:12	20:11:25	2.94	1.70	10.30	10.61	297,19	
AC Boo*	0.410	1.960	F0V	14:56:28	46:21:44	7.58	1.27	10.00	10.62	273,131	
AR Boo				13:45:51	25:10:18			13.50	14.50	298,191	A
CK Boo*	0.111	1.171	F7-8V	14:35:04	09:06:49	6.38	1.34	8.99	9.26	247,150	
DU Boo			A2	14:22:18	41:27:02	2.58	1.03	8.60	9.08	101	
EF Boo	0.512	2.129	F5V	14:32:31	50:49:41	6	1.06	9.43	9.99	251,211	
FI Boo	0.372	0.343	G3V	15:22:06	51:10:54	9.52	2.10	9.60	9.71	175	
V1 Boo				14:47:27	22:45:15			11.85	12.20	44	R
V2 Boo				14:50:08	29:38:59			10.77	11.35	44	R
V3 Boo				14:59:37	25:02:45			12.68	13.00	44	R
V4 Boo				14:59:54	25:54:34			11.46	11.90	44	R
UU Cam			A7	03:52:17	74:33:54			11.40	11.90	218	A
AO Cam	0.413	1.520	G0V	04:28:13	53:02:42			9.50	10.00	250,18	
CD Cam				07:58:49	72:46:18			11.63	11.85	55	
CY Cam			B8	03:52:49	53:29:01	0.29	1.23	8.43	8.52	78	H
DN Cam	0.421	2.336	F2V	04:42:46	72:58:42	4.49	0.89	8.23	8.73	251,281	
FN Cam	0.222	2.496	A9V	09:22:58	77:13:11	3.62	0.95	8.58	9.05	251,281	
V1 Cam				05:43:05	68:40:07			10.90	11.50	213	

Table 2. (continued)

Name		Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
V31	Cam		4	51830.431	0.276593	8								
V32	Cam		4	51881.4668	0.365721	5								
TX	Cnc	WP	1	50926.3881	0.38288221	30	v	0.596	0.08	62.4	6338	6400	0	WD
AD	Cnc	WP	3	51202.5379	0.28273848	8	v	0.625	0.14	64.9	4825	5164	-0.02	WD
AH	Cnc	WP	1	50904.2764	0.36044334	8	:	0.610	0.41	62.9	6416	6500		WD
EH	Cnc		4	50927.6119	0.4180365	6								
RV	CVn	B	4	51334.8751	0.26956738	4	v							
BI	CVn	A	3	51278.6706	0.38420639	34	v	0.865	0.17	69.2	6700	6684		WD
BO	CVn	AT	3	51645.7439	0.51746056	29		0.205	0.18	87.5	7240	7150		WD
DF	CVn	B?	4	52014.7691	0.3268916	10								
V1	CVn	WT	3	52045.7922	0.365808	13		0.241	0.00	82.0	7100	7200		BM
UZ	CMi		5	51925.4166	0.55136108	5	:							
BH	CMi		4	51189.485	0.55924805	16								
V1	CMi	B?	4	51242.2301	0.31315	5							-0.03	
AL	Cas	E?	5	52065.7717	0.50055548	5	v							
BH	Cas	WP	1	51920.515	0.40589159	36	v	0.475	0.09	70.1	4790	4980		WDp
BS	Cas		5	52026.3369	0.44046934	4	v							
CW	Cas	WP	3	52527.4329	0.31886282	41	v	0.533	0.05	73.7	5086	5510		WD
EG	Cas		5	49228.5217	0.61145174	1	v							
EY	Cas		5	50747.8487	0.48197915	3	v							
MT	Cas	W	4	51924.4304	0.31387775	4	v							
V366	Cas*		4	51185.3297	0.72928926	16	v!						0	
V440	Cas	WP	3	49624.7971	0.32568792	10		0.375	0.12	76.7	5006	5347	-0.02	WD
V471	Cas	A	3	51884.3763	0.40536078	7	v	0.595	0.19	83.3	5660	5636	0	WD
V523	Cas*	WP	1	51822.4244	0.23369229	80	3b	0.530	0.20	83.8	4434	4715	0.03	L2
V608	Cas		4	52065.476	0.380401	6								
V776	Cas	AP	2	48500.0775	0.440413	2	::						0	
RR	Cen	AT	1	48389.6886	0.605692	17	v	0.180	0.35	78.7	7250	7188	0	WD
SV	Cen	E	1	49022.7389	1.658109	29	v	0.840	0.90	84.2	28000	17000	0	W3
V593	Cen	E	5	46888.1733	0.75535756	6								
V606	Cen	ET	1	49457.7763	1.49509297	6	:	0.541	0.04	87.3	29200	21770	0	WDr
V676	Cen	WP	3	49961.6341	0.29239402	12		0.720	0.09	82.0	4550	4819		WD
V677	Cen	WT	3	46275.0087	0.3250296	6		0.142	0.34	87.1	5745	5841	0	WDp
V752	Cen	WT	1	48498.3154	0.37022484	18	v	0.317	0.06	81.7	6221	5955	-0.02	WDp
V757	Cen	WP	1	48367.0019	0.34316916	19		0.684	0.14	69.3	6000	5927	0.02	WD
V758	Cen	B?	3	46589.9343	0.580785	16	v	0.270	0.42	90.0	11700	8181		WD
V759	Cen		5	48517.4178	0.39399912	19								
V839	Cen	W	4	48500.237	0.330934	2	::							
V901	Cen		5	48500.1555	0.354229	1							0	
VW	Cep*	WP	1	52506.4328	0.27831149	764	3b	0.395	0.22	63.6	5271	5382	0.03	ME
WZ	Cep	A	3	52217.5934	0.41744491	8	v	0.330	0.10	85.1	6440	6300	-0.05	DJ
EF	Cep		5	51885.7625	0.6061077	12	v							
EM	Cep	EB	4	51435.7832	0.8061783	42	v						0	
EP	Cep	A?	3	40804.563	0.2897439	0		0.233	0.00	74.9	5100	4774	0	WD
ER	Cep	WP	3	49891.0883	0.28573641	11		0.549	0.01	78.1	5330	5061		WD
GW	Cep	W	3	51968.464	0.31882946	19	v	0.380	0.23	84.0	5800	6115	0.01	WD
IP	Cep		5	50717.5468	0.8989054	10	v							
V699	Cep	AT	4	50433.3516	0.805074	1	::						0	
TW	Cet	WP	1	50706.5674	0.31685122	15	v	0.581	0.03	83.2	5460	5600	0	WD
VV	Cet	B	3	51494.3952	0.52239339	11	v	0.249	0.16	80.2	8100	5900		WD
VY	Cet	W	3	48176.6608	0.34080937	8		0.665	0.00	78.4	5393	5610	0	WD
AA	Cet	AT	5	48508.053	0.53616976	19	v							
CL	Cet		5	48500.2124	0.621618	1								
CT	Cet		5	48500.1847	0.2564863	1								
DY	Cet		5	48500.251	0.440794	1	::							
EE	Cet		2	52548.6291	0.3799207	1								
DO	Cha		5	48500.4868	0.681446	1								
RS	Col	AP	3	48481.1637	0.67234993	5	v	0.500	0.24	68.7	5950	5789	0	W3
RW	Com	WP	1	52338.7436	0.23734498	18	v	0.343	0.17	75.2	5078	5400	-0.07	WD
RZ	Com	WT	1	51676.7717	0.33850768	33	v	0.436	0.07	86.0	5500	5564	0	WD
SS	Com		5	50944.6094	0.41281523	13	v							

Table 2. (continued)

Name	q_{sp}	M^* [$M_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
V31 Cam				05:58:16	59:46:22			14.50	14.70	66	
V32 Cam				05:59:26	59:51:24			16.00	16.40	66	R
TX Cnc	0.530	0.860	F5V	08:40:02	18:59:59			10.00	10.35	294,187	C
AD Cnc			K0V	08:46:21	10:20:00			13.10	13.40	270	A
AH Cnc	0.537	0.915	F5V	08:51:38	11:50:54			13.31	13.69	293,180	A,C
EH Cnc			F?	08:26:18	20:52:48			11.73	12.47	85	
RV CVn			F8	13:40:18	28:18:19			13.50	14.30	274	
BI CVn			F2V	13:03:16	36:37:01	5.31	1.65	10.26	10.71	169	
BO CVn			A5	13:59:08	40:49:09			9.48	10.10	209,17	
DF CVn				12:43:37	38:44:16			10.96	11.47	280	
V1 CVn				12:26:08	35:55:49			12.75	13.20	47	
UZ CMi			F8	07:50:53	03:39:18			11.60	12.10	202	
BH CMi				08:02:36	01:43:50			9.30	9.67	308	7
V1 CMi				07:50:45	-00:00:11					188	
AL Cas				02:13:46	70:08:13			12.90	13.60	11	
BH Cas	0.475	0.910	K4V	00:21:21	59:09.06			12.30	12.70	189	A
BS Cas				01:21:39	59:10:30			12.20	12.60	11	A
CW Cas			G8V	00:45:50	63:05:48			11.02	11.62	225	A
EG Cas				23:45:35	57:12:24			12.90	13.40	275	A
EY Cas				00:03:26	57:42:24			14.00	14.50	34	
MT Cas				00:14:43	56:40:14			13.30	14.13	126	
V366 Cas*			G1:	01:08:20	58:42:06			12.00	12.70	2	
V440 Cas			G8	23:38:11	51:23:12			14.89	15.52	262	
V471 Cas			G9V	01:32:20	55:11:54			13.50	14.20	167	A
V523 Cas*	0.415	0.847	K5V	00:40:06	50:14:16			10.62	11.45	19,166	
V608 Cas				02:24:15	71:22:42			12.00	12.52	45	A
V776 Cas	0.130	0.975	F2V	01:53:23	70:02:33	4.86	1.56	8.94	9.09	251,102	
RR Cen	0.210	2.115	A9V	14:16:57	-57:51:16	9.76	0.85	7.27	7.68	19,279	
SV Cen	0.707	14.61	B2	11:47:57	-60:33:55			8.71	9.98	245,240	
V593 Cen			B5	13:17:13	-62:37:30			10.50	11.30	155	A
V606 Cen	0.527	22.66	B1V	13:21:36	-60:31:15			9.39	10.17	171	
V676 Cen			K2V	14:37:50	-38:50:42			11.90	12.60	105	A
V677 Cen			G2V	14:42:35	-40:27:16			11.50	11.70	18,143	
V752 Cen	0.311	1.650	F7V	11:42:48	-35:48:58	9.51	1.47	9.10	9.66	18,19	
V757 Cen	0.684	1.423	F9V	13:49:00	-36:22:33	14.18	1.10	8.30	8.70	180,19	
V758 Cen			B9V	13:52:43	-55:32:28	1.76	1.55	8.80	9.40	163	
V759 Cen			F9V	14:10:41	-47:46:08	15.88	0.93	7.40	7.56	277	
V839 Cen			G2:	12:58:50	-36:58:33	11.94	1.66	9.51	10.13	109	
V901 Cen				11:14:03	-51:32:56	-0.02	2.92	11.94	12.30	139	H
VW Cep*	0.395	1.280	G9V	20:37:20	75:35:52	36.16	0.97	7.23	7.68	111	mv
WZ Cep			F5V	23:22:24	72:55:24			11.40	12.00	75	A
EF Cep				04:45:40	80:44:24			12.00	12.60	202	
EM Cep			B0.5	21:53:48	62:36:52	1.39	0.55	7.02	7.17	145	
EP Cep				00:46:54	85:21:44			16.60	17.10	53	
ER Cep			G9V	00:50:28	85:15:09			15.67	16.37	180,54	
GW Cep			F5V	01:45:59	80:04:54			11.40	12.10	225	A
IP Cep				21:46:47	68:51:54			11.50	12.10	8	A
V699 Cep				22:46:01	57:46:50			11.60	11.94	110	
TW Cet	0.530	1.948	G5V	01:48:54	-20:53:35	9.91	3.50	10.43	11.18	252	
VV Cet			A5V	00:55:43	-02:05:38			10.30	11.00	230	
VY Cet			G5V	01:49:34	-19:37:42			11.10	11.72	154	
AA Cet			F2	01:59:01	-22:55:11	4.63	2.36	6.20	6.70	47	mv
CL Cet			F2V	00:29:04	-17:13:01	1.04	3.63	9.88	10.00	78	H
CT Cet			G8/K0	01:09:46	-20:12:59	12.52	4.01	9.41	9.59	139	H,mv
DY Cet			F5V	02:38:33	-14:17:57	3.82	2.17	9.55	10.12	139	H
EE Cet	0.315	1.706	F8V	02:49:52	08:56:23	-0.85	4.89	8.758	9.03	249	H,mv
DO Cha			F7V	09:07:47	-82:19:30	12.56	0.57	7.74	7.78	78	H
RS Col			G2V	05:15:31	-28:45:02	5.5	1.28	9.54	9.99	186	
RW Com	0.345	0.691	K0V	12:33:01	26:42:59	11.45	2.45	11.00	11.70	19,193	
RZ Com	0.430	1.569	G2V	12:35:05	23:20:14	1.15	1.92	10.42	11.13	19,296	
SS Com			F5	12:49:39	18:42:12			11.30	11.90	227	

Table 2. (continued)

Name	Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
AQ Com		4	51952.7879	0.28134	3	::							
CC Com	WT	1	51207.6568	0.22068594	45	v	0.518	0.20	87.9	4302	4500	0.03	WD
DD Com		4	52026.3902	0.26920788	11	v						-0.1	
EK Com	WT	3	52026.3833	0.2666851	18	v	0.304	0.15	88.5	5000	5310	-0.08	WD
KR Com	W	2	48500.2121	0.407968	1								
V1 Com		4	51992.834	0.2863602	11								
V2 Com		4	51967.4962	0.3379351	8								
eps CrA	AT	1	48536.6218	0.5914407	7	v::	0.112	0.30	72.3	7100	6639	0	WD
FS CrA	W	3	44826.5482	0.2636377	3		0.758	0.15	86.5	4700	4567		WD
YY CrB	AP	1	51975.6042	0.376564	17		0.243	0.63	70.0	6135	6142	0.01	WDs
W Crv	BT?	1	51307.6587	0.38808083	10	v		0.15	88.0			0	
SX Crv	A	2	48482.9022	0.3166209	4	v						-0.02	
VY Cru		4	43204.769	0.695599	0							-0.11	
DT Cru	E	5	48500.3952	0.916848	1								
CV Cyg*	W	3	51750.3355	0.98341063	13	v!	0.210	0.49	79.6	6000	6149		BS
DK Cyg	AT	1	51710.8477	0.47069316	30	v!	0.271	0.55	80.3	7351	7200	0	WD
V382 Cyg	EP	1	51429.4568	1.88553364	83	v	0.677	0.22	85.7	36100	34758		WD
V401 Cyg	AP	1	51742.8339	0.5827244	6	v	0.300	0.46	77.0	6700	6650	-0.05	BM
V628 Cyg	EB?	4	51120.3118	0.9665919	14	v							
V700 Cyg	W	3	50324.3687	0.29063138	12	v	0.637	0.26	80.3	5351	5770	-0.02	WD
V704 Cyg		5	51476.5392	0.57070646	4								
V859 Cyg		5	51814.3938	0.40500399	12	v							
V865 Cyg	A	3	51811.4501	0.36530242	6	v	0.446	0.17	84.2	5650	5537		WD
V934 Cyg		5	50659.7175	0.70069643	7								
V1073 Cyg*	AP	1	51005.7918	0.7858507	51	v!	0.320	0.04	68.4	6700	6661		WDs
V1191 Cyg		5	52528.4546	0.3133818	19								
V1193 Cyg		4	51361.4349	0.50375994	3	:							
V1918 Cyg		4	51288.8531	0.41317887	5								
V2150 Cyg	AP	2	51797.3951	0.5918609	2	::							
V2240 Cyg		4	51449.4203	0.404194	6							0	
V1 Cyg		4	51806.487	0.353358	9								
V2 Cyg		4	51811.3124	0.3359535	9							0	
V3 Cyg		4	51771.3637	0.3069917	6								
V4 Cyg		4	51781.4048	0.35436	7								
EX Del		5	51814.2549	0.33098799	20	v							
LS Del	WP	1	52200.5363	0.3638405	33	v	0.562	0.06	48.5	5704	5780	0	WD
RW Dor	WP	1	48413.2686	0.28546381	31		0.666	0.10	76.6	5200	4777	0.02	WD
AP Dor		5	48500.32	0.427187	1								
BV Dra	WP	1	48662.1709	0.35006656	70	v	0.411	0.11	76.3	6245	6345	-0.02	WDs
BW Dra	WP	1	51329.2146	0.292166	74	v	0.280	0.14	74.4	5980	6164	0	WDs
EF Dra*	A?T	1	52352.7427	0.4240257	33	v	0.160	0.45	78.1	6000	6054		WDs
FU Dra	WT	1	51952.6676	0.3067168	11	v	0.251	0.23	78.6	5800	6133	-0.02	WDs
GM Dra	A	2	51750.401	0.3387412	3	::						-0.01	
IV Dra	WP?	3	52049.385	0.26803804	10	::	0.500	0.20	69.0	5400	5600	0.02	BM
UX Eri*	AP	1	51208.2757	0.44528714	23	v!	0.420	0.00	79.0				
YY Eri*	WT	1	51600.1084	0.32150003	112	3b?	0.422	0.12	81.8	5600	5317	-0.04	WD
AM Eri		5	48532.5377	0.31657401	0	v							
BC Eri		4	51548.0313	0.52724395	13	:							
BL Eri	AT	1	50743.5999	0.41691659	18	v	0.546	0.16	89.8	5980	5603	-0.04	WD
BV Eri	B	3	51165.6457	0.5076546	10		0.253	0.21	79.3	6850	5592		WD
FX Eri		5	48500.113	0.292345	1							0	
QW Gem	P	5	48500.306	0.358127	1								
RV Gru		4	46674.9186	0.25951625	19	v							
BC Gru	W	3	48479.9266	0.30735686	9	v	0.565	0.01	66.9	5450	5072	-0.01	WDp
AK Her*	AT	3	50971.4088	0.42152272	158	v!	0.233	0.10	80.8	6400	6033		WD
IT Her		4	52000.5054	0.3393903	8	v							
MS Her		5	51757.5281	0.86804225	5								
V412 Her	AT	3	51295.7244	0.33621282	3	v	0.463	0.23	90.0	6000	6050	0	L2
V477 Her		5	51288.0425	0.32517323	2								
V502 Her		5	51307.0661	0.36927688	7								
V687 Her		5	52427.4972	0.3214515	7	v::							

Table 2. (continued)

Name	q_{sp}	M^* [$M_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
AQ Com				12:42:43	21:52:18			15.20	15.70	67	
CC Com	0.470	1.014	K5V	12:12:06	22:31:58			11.30	12.21	178,19	
DD Com				12:28:46	21:43:34			14.30	15.05	123	
EK Com			G9V	12:51:21	27:13:54			12.70	13.40	261	
KR Com	0.091	0.517	G0IV	13:20:16	17:45:57	37.51	1.80	7.26	7.32	249	H,mv
V1 Com				12:32:05	26:22:48			12.45	13.15	43	R
V2 Com				12:33:05	27:08:03			12.85	13.30	43	R
eps CrA	0.128	1.677	F2V	18:58:43	-37:06:26	33.43	0.92	4.74	5.00	279,95	
FS CrA			K3	18:06:12	-37:30:54			13.80	14.60	50	A
YY CrB	0.243	1.647	F8V	15:50:32	37:50:07	11.36	0.85	8.64	9.44	250,224	
W Crv	0.682	1.680		12:07:34	-13:08:59			11.16	12.36	248	
SX Crv	0.066	0.861	F6V	12:40:15	-18:48:01	10.9	1.21	9.07	9.28	251,272	
VY Cru			A8	12:35:31	-63:15:06			13.10	13.60	192	A
DT Cru			B3	12:53:41	-61:12:57	1.92	1.70	0.022	10.21	78	H
CV Cyg*			F9V	19:54:21	38:02:50			10.80	11.40	287	
DK Cyg	0.325	2.243	A8V	21:32:56	34:22:18	4.42	1.78	10.37	10.93	247,279	
V382 Cyg	0.742	44.6	O7V	20:18:47	36:20:26	-0.28	1.02	8.29	9.18	69,108	
V401 Cyg	0.290	2.008	F0	19:29:20	30:24:28	11.55	8.04	10.64	11.17	299,249	ms
V628 Cyg				21:34:04	47:14:22			12.20	12.70	9	
V700 Cyg			G2V	20:31:13	38:47:42			11.90	12.40	207	A
V704 Cyg				21:28:12	45:37:36			13.60	14.60	271	
V859 Cyg				19:27:13	28:56:50			11.70	12.20	8	
V865 Cyg			G6V	19:27:25	33:03:09			14.00	14.70	264	
V934 Cyg				19:39:29	30:16:35			13.20	13.70	5	
V1073 Cyg*	0.320	1.589	F2V	21:25:00	33:41:15	5.44	0.95	8.23	8.61	197	
V1191 Cyg				20:16:51	41:57:41			10.82	11.15	8	
V1193 Cyg				20:20:06	59:26:00			13.80	14.30	70	
V1918 Cyg				19:26:09	52:26:47			10.59	11.12	49	
V2150 Cyg	0.802	1.376	A6V	21:18:11	30:35:22	4.73	1.59	8.09	8.19	175	H
V2240 Cyg				20:15:56	37:27:16			12.03	12.26	253	
V1 Cyg				19:21:44	48:03:56			13.35	14.05	42	R
V2 Cyg				19:25:38	53:25:20			12.05	12.30	42	R
V3 Cyg				19:29:55	48:55:00			12.80	13.40	40	R
V4 Cyg				19:40:29	50:25:55			13.10	13.55	41	R
EX Del				20:16:58	15:52:53			12.80	13.30	127	
LS Del	0.375	0.617	G0V	20:57:10	19:38:59			8.61	8.76	174,276	
RW Dor	0.680	0.987	K1V	05:18:32	-68:13:33	8.91	1.97	10.80	11.40	115,184	
AP Dor			F8III	05:06:45	-59:03:03	4.66	0.92	9.38	9.60	139	H
BV Dra	0.402	1.274	F9V	15:11:50	61:51:25	14.86	2.56	7.88	8.48	137,19	mv
BW Dra	0.280	1.011	F8V	15:11:50	61:51:41	15.32	5.18	8.61	9.08	137	mv
EF Dra*	0.160	1.970	F9V	18:05:30	69:45:16			10.48	10.82	174,225	ms
FU Dra	0.251	1.379	F8V	15:34:45	62:16:44	6.25	1.09	10.55	11.07	250,282	H
GM Dra	0.180	1.002	F5V	17:20:22	57:58:27	10.16	0.88	8.77	9.04	60,249	
IV Dra			G6	15:36:23	53:19:12			13.54	13.95	236	
UX Eri*	0.373	1.798	F9V	03:09:53	-06:53:34	6.57	2.84	10.50	11.11	250,185	
YY Eri*	0.400	2.007	G5V	04:12:09	-10:28:10	17.96	1.20	8.10	8.80	303,19	
AM Eri				04:29:54	-12:14:48			14.40	15.20	227	A
BC Eri			F6	04:46:59	-14:37:23	2.33	2.05	10.83	11.32	200	
BL Eri	0.540	0.938	G0V	04:11:48	-11:47:27			11.50	12.20	168,302	
BV Eri			F1V	03:51:53	-10:31:49	6.12	1.11	8.12	8.63	106	
FX Eri				03:37:01	-41:31:39	13.67	1.06	9.70	9.97	139	H
QW Gem			G0	06:50:46	29:27:11	4.09	5.42	10.33	10.74	139	H
RV Gru				22:39:24	-46:52:32			11.00	11.40	64	
BC Gru			G8V	22:44:45	-48:09:50			10.60	10.94	258,215	
AK Her*			F5V	17:13:58	16:21:01	10.47	2.77	8.29	8.77	19,177	
IT Her				18:45:47	25:20:18			12.15	12.60	71	A
MS Her				18:16:58	27:39:12			12.90	13.30	72	
V412 Her				17:30:30	25:54:15			13.90	14.70	114	
V477 Her				17:20:58	26:18:20			14.90	15.50	72	
V502 Her				17:35:50	32:19:12			12.80	13.70	72	
V687 Her			G0	16:14:28	23:42:30			14.40	15.00	72	A

Table 2. (continued)

Name	Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
V719 Her	AT	4	51697.4906	0.400928	6		0.296	0.46	87.3	6580	6267	0	WD
V728 Her	WP	1	52065.676	0.4712897	27	v	0.179	0.71	69.2	6622	6776	0	WDs
V731 Her		5	52426.6853	0.5381506	2								
V732 Her		5	51120.3011	0.5492177	3	:							
V829 Her	WP	1	52041.7237	0.35814966	16	v	0.409	0.15	57.0	5860	6035	0.01	
V842 Her	WT	1	50541.6277	0.41904059	10	v	0.260	0.25	79.0	6000	6280		BM
V857 Her	AT	3	52320.6299	0.382228	16		.0725	0.80	90.0	8300	7950		BM
V899 Her	AP	2	51708.6258	0.4211722	2	::						-0.01	
V921 Her	P	5	48500.221	0.877366	1								
V972 Her	W	2	51392.6037	0.4430974	3	::							
V1003 Her		5	48500.2283	0.493322	1								
V1005 Her	WT	3	52053.5702	0.27895877	20	v	0.290	0.10	85.0	4750	4820	0	BM
V1 Her		4	52065.5005	0.240641	1							0	
V2 Her		4	52056.3941	0.287848	1							0	
V3 Her	B?	4	52056.3775	0.315408	1							0	
V4 Her		4	51746.4772	0.2514358	10							0.08	
V5 Her		4	51746.4139	0.2581094	10								
V6 Her		4	51746.5126	0.2942801	8							-0.02	
SY Hor	W	3	45294.8827	0.31178417	9		0.667	0.05	82.4	5240	4934	0	WD
WY Hor		5	48500.221	0.39894	1								
DF Hya*	WT	3	50954.2093	0.33060484	8	v!	0.424	0.12	84.3	6000	5851	-0.02	WD
EH Hya	WT	3	47656.7246	0.29690968	5	:	0.314	0.12	81.9	5300	5536	-0.01	WD
EZ Hya*	A	2	47209.852	0.449744	28	v!						-0.04	
FG Hya	AT	1	51222.5994	0.3278278	50	v	0.129	0.74	86.8	5900	5852	0.02	WD
RT Hyi	W	4	47068.9867	0.283997	4	:							
CE Hyi		5	48500.1942	0.440894	1							0	
CN Hyi		5	48500.095	0.456107	1								
CP Hyi		5	48500.2256	0.479406	1								
ST Ind	A	3	44843.7159	0.40191649	22	v	0.602	0.19	71.3	6430	6414		WDp
SW Lac*	WP	1	51860.3224	0.3207151	359	3b	0.797	0.39	80.2	6200	5834	0.04	WDs
EM Lac	W	3	48309.3324	0.38913508	26	v	0.629	0.22	74.3	5500	5438	0	WD
LU Lac	W	4	44843.3672	0.29880135	3								
PP Lac		3	51901.2938	0.4011618	6		0.325		80.3				KO
V344 Lac		5	51467.5748	0.39129142	4	v							
V407 Lac		5	48500.3223	0.813076	1								
UZ Leo	AT	1	51262.7038	0.6180525	37	v	0.233	0.85	79.7	7250	7574		BS
XY Leo*	WP	1	51550.6302	0.28409761	203	3b	0.500	0.06	65.8	4575	4850	0	WD
XZ Leo	AP	1	51629.8051	0.48773748	31	v	0.726	0.02	73.3	7850	7147	-0.05	WD
AM Leo*	WT	1	50851.4883	0.36579735	83	3b?	0.426	0.15	87.0	6200	6380		
AP Leo	AT	1	50926.3545	0.43035477	51	v	0.301	0.23	79.9	6000	6074		WD
CE Leo	WT	3	50249.413	0.30342898	7	v	0.505	0.03	84.6	4850	5111	-0.06	WD
ET Leo	B	2	48499.9714	0.346503	1	::							
EX Leo	A	1	52309.8178	0.4086025	4		0.199	0.31	61.1	6330	6167	0	WDs
RT LMi	WT	1	52368.6132	0.37491781	13	v	0.385	0.26	84.0	5855	6000	0.02	WD
VW LMi		4	51671.6006	0.4775492	1	::							
VZ Lib	AT	2	48336.6211	0.35827814	9	v							
V1 Lib	B?	4	51679.424	0.69552	3							0	
FT Lup	BT	1	45061.8338	0.4700831	31	v	0.450	0.12	84.7	6700	4820		WD
UV Lyn	AP	1	51958.6557	0.4149846	48	v!	0.367	0.45	66.8	6045	6262	-0.03	WDs
MZ Lyr		4	47918.7986	0.96739657	3	v							
NY Lyr		5	51420.4971	0.4408032	7	v							
PY Lyr		5	50285.6012	0.38576857	3	v!							
V400 Lyr		4	51907.299	0.2534283	22	v							
V563 Lyr		4	51385.4268	0.57764116	4							0	
V1 Lyr	B?	4	51757.5642	0.273127	7							0.03	
V2 Lyr		4	51757.4883	0.24291	9								
V3 Lyr		4	51766.6097	0.2286055	9								
V4 Lyr	BP	4	51766.584	0.2559067	15								
TY Men	AT	3	48355.1639	0.4616668	13	v	0.215	0.10	79.5	8164	7183	-0.04	WD
AN Men		5	48500.3131	0.461972	1								
V396 Mon	W	3	51952.5161	0.396342	6	v	0.402	0.05	83.8	5920	6210	-0.04	WD

Table 2. (continued)

Name	q_{sp}	M^* [$M_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
V719 Her				17:09:53	42:56:08			12.50	13.10	92	
V728 Her	0.179	1.592	F3V	17:18:04	41:50:40			10.90	11.50	201	
V731 Her				17:19:47	43:59:12			13.30	13.90	72	A
V732 Her				17:20:18	44:19:30			13.20	14.20	255	A
V829 Her	0.409	1.062	G2V	16:55:48	35:10:58			10.10	10.39	174	
V842 Her	0.260	1.620	F9V	16:06:02	50:11:12			9.85	10.45	247,208	
V857 Her			A6	16:46:54	38:38:58			10.00	10.29	100	
V899 Her	0.566	2.331	A5V	16:35:02	33:12:48	8.06	0.77	7.93	8.07	175,212	
V921 Her			A5	16:49:31	47:06:29	2.39	0.97	9.44	9.80	139	H
V972 Her	0.167	0.276	F4V	17:58:05	32:38:53	16.25	0.61	6.72	6.79	249	H
V1003 Her			A7	18:53:18	21:13:33	3.05	1.57	9.81	9.90	78	H
V1005 Her				16:31:54	50:21:12			13.20	13.75	260,237	
V1 Her				17:10:18	38:26:39			12.50	13.25	46	R
V2 Her				17:18:40	35:54:24			13.00	13.80	46	R
V3 Her				17:20:24	41:15:15			11.15	11.55	46	
V4 Her				17:34:54	44:11:52			13.20	13.70	35	R
V5 Her				17:43:11	43:27:09			12.65	13.20	36	R
V6 Her				18:08:36	33:42:05			11.00	11.65	37	R
SY Hor			G9V	04:14:18	-46:26:57			11.40	12.10	154	
WY Hor			G2IV/V	02:34:01	-65:36:34	8.82	1.00	9.52	9.70	139,78	H
DF Hya*			F8V	08:55:02	06:05:38			11.00	11.50	203	
EH Hya			G7V	12:04:51	-33:09:36			14.20	15.00	259	
EZ Hya*	0.252	1.721	F9V	09:26:41	-13:45:06			10.40	10.70	19,1	
FG Hya	0.112	1.567	G2V	08:27:04	03:30:52	2.92	1.90	9.90	10.28	174,304	
RT Hyi				01:11:04	-79:10:54			13.20	14.10	97	A
CE Hyi			F5V	01:38:56	-58:34:49	3.88	2.01	8.48	8.53	78	H
CN Hyi			F6V	02:45:37	-71:14:09	17.22	0.65	6.66	6.93	139	H
CP Hyi			F0V	03:00:14	-81:05:19	8.38	0.60	7.90	8.04	139	H
ST Ind			F5V	20:35:24	-48:19:20			11.30	11.79	312	
SW Lac*	0.797	1.738	F8V	22:53:42	37:56:19	12.3	1.26	8.51	9.39	219,310	ms
EM Lac			G8V	22:23:55	54:01:12			12.50	13.09	179	A
LU Lac				22:21:42	51:22:03			14.60	15.45	123	
PP Lac				22:42:42	53:26:00			11.10	12.00	90,16	A
V344 Lac			A3:	22:18:47	51:59:18			12.20	13.00	254	
V407 Lac			A0	22:24:37	41:18:24	1.49	0.93	8.31	8.39	78	H
UZ Leo	0.303	2.573	A9V	10:40:33	13:34:01	6.27	1.59	9.58	10.15	247,287	
XY Leo*	0.500	1.046	K2V	10:01:40	17:24:38	15.86	1.80	9.45	9.93	128,133	ms
XZ Leo	0.348	2.242	A8V	10:02:34	17:02:47	0.62	1.71	10.60	11.20	247,205	
AM Leo*	0.450	2.000	F5V	11:02:11	09:53:43	13.03	3.64	9.25	9.83	33,131	mv
AP Leo	0.297	1.774	F7V	11:05:05	05:09:06	8.26	1.70	9.32	9.91	174,311	
CE Leo			K0V	11:44:24	23:21:23			11.80	12.60	268	
ET Leo	0.167	0.450	G8V	10:33:26	17:34:27	13.9	1.44	9.55	9.72	102,249	
EX Leo	0.199	1.255	F6V	10:45:07	16:19:48	9.84	1.11	8.27	8.49	175,222	
RT LMi	0.366	1.749	F7V	09:49:48	34:27:15			11.40	11.70	250,204	
VW LMi			F3V	11:02:52	30:24:55	8.04	0.90	8.03	8.45	79	
VZ Lib	0.237	1.704	G0	15:31:52	-15:41:10	4.92	1.96	10.13	10.63	61,251	ms
V1 Lib				14:51:17	-11:09:43			11.65	11.97	88	
FT Lup	0.430	2.040	F0+K2V	14:59:53	-42:58:59			9.70	10.64	136	
UV Lyn	0.367	1.440	F6V	09:03:24	38:05:55	8.16	1.62	9.41	9.81	174,282	
MZ Lyr				18:54:34	26:52:48			13.30	14.00	183	A
NY Lyr				19:16:37	34:23:42			12.70	13.20	3	
PY Lyr			F0:	19:20:26	28:56:44			12.50	13.50	254	
V400 Lyr				19:13:53	38:06:53			12.70	13.35	41	R
V563 Lyr			F5	18:45:07	40:11:12			10.96	11.47	27	
V1 Lyr				18:27:12	36:14:37			12.05	12.66	38	R
V2 Lyr				18:50:52	43:40:07			12.77	13.25	39	R
V3 Lyr				18:51:10	35:35:57			12.81	13.36	39	R
V4 Lyr				18:55:38	40:58:57			13.44	14.61	30	R
TY Men			A5V	05:26:50	-81:35:07	5.93	0.63	8.08	8.56	151,164	
AN Men			F5V	06:00:19	-80:35:53	3.84	0.86	9.36	9.54	78	H
V396 Mon				06:38:36	03:36:18			12.60	13.60	305	

Table 2. (continued)

Name		Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
V453	Mon		5	51252.3388	0.5109999	13	v							
V514	Mon		5	51178.5263	0.55737224	4	v:							
V524	Mon		4	50852.8266	0.28361635	4	v							
V530	Mon		5	50860.3406	0.52553217	7	v:							
V532	Mon		5	50749.8738	0.46697565	11	v							
V714	Mon		4	51955.497	0.34450913	31	v						0	
V752	Mon		5	48500.2837	0.462902	1								
V753	Mon	A	2	48500.2213	0.677049	1								
V1	Mon		4	51621.072	0.5263	1								
TV	Mus	AT	1	45789.5609	0.44568157	3	::	0.150	0.87	78.9	5980	6088	0	W3
BR	Mus	EP	3	44992.7749	0.79819721	6	::	0.960	0.11	78.4	18000	17665		WD
UZ	Oct	AT	3	48405.5789	1.1493802	15	v	0.276	0.26	78.6	6605	6577	-0.02	WD
DE	Oct		5	48500.2959	0.5555922	1								
V502	Oph*	WP	1	51393.6263	0.453387	79	3b?	0.377	0.24	71.3	5968	6200	-0.02	WD
V508	Oph	AT	1	50987.4642	0.34479261	38	v	0.530	0.10	86.1	6000	5830		WDs
V566	Oph*	AT	1	50640.4219	0.40965107	173	v!	0.239	0.41	79.8	6700	6618	0	WD
V839	Oph*	AP	1	51390.4123	0.4090056	67	v!	0.400	0.39	77.0	6250	5391		WD
V2201	Oph		5	43195.62	0.34501	0	:							
V2203	Oph		5	42812.645	0.4550021	0	v:							
V2357	Oph		5	48500.2529	0.415568	1								
V2377	Oph	WP	2	48500.0316	0.425401	1								
V2382	Oph	E	5	48500.7673	1.05575	1								
V2388	Oph	AT	1	49890.5045	0.8023	1		0.290	0.71	83.9	6450	6130		WD
ER	Ori*	WP	1	51555.5621	0.42340085	62	3b?	0.640	0.15	87.5	6200	6314	0	WDp
FZ	Ori		4	51178.565	0.39998306	5	v						0.03	
V343	Ori		5	51906.7982	0.80913763	7	v							
V1353	Ori		4	50120.5327	0.47143698	3	::							
V1363	Ori		4	48500.0288	0.431921	1	::						-0.01	
V1387	Ori		5	48500.6839	0.730166	1								
BF	Pav	W	3	49219.6182	0.30231864	16	v	0.714	0.10	84.8	5430	5330	0	WD
HY	Pav	W	3	47023.8115	0.3516555	8		0.470	0.06	80.5	5000	4726	0.02	WD
LT	Pav	W	3	45991.67	0.39367177	9	v	0.340	0.34	81.1	6095	6042	0	WD
MW	Pav	AT	3	48448.3861	0.7949882	15	v:	0.182	0.50	85.1	7620	7570	-0.03	WD
V386	Pav		5	48500.2722	0.551841	1								
U	Peg	WP	1	52152.7109	0.37477718	104	v!	0.331	0.09	76.0	5515	5800	-0.02	WD
BB	Peg	WP	1	48487.3608	0.36150245	38	v!	0.402	0.37	79.9	6200	5883	-0.04	WD
BX	Peg*	WT	1	51761.9165	0.28041797	37	v!	0.376	0.18	87.5	5300	5528	-0.01	WD
V351	Peg	WP	2	48500.4859	0.593297	1	::						0	
V357	Peg		4	51489.4583	0.578447	1	::							
V1	Peg		4	52144.5285	0.3422865	8								
KN	Per	AT	3	49698.1139	0.8664593	8		0.230	0.59	82.3	7650	7381		WD
V432	Per	BT	4	51911.2708	0.38331037	17	v						0	
V579	Per		5	48500.2564	0.465624	1								
YZ	Phe	WT	3	47849.4256	0.23472693	14	:	0.402	0.02	82.4	4800	5055	0.07	WD
AD	Phe	A	3	51418.4164	0.37992352	23	v	0.940	0.15	73.6	5850	5815	-0.05	W3
AE	Phe	WT	1	48400.2435	0.36237274	39		0.461	0.17	88.0	6000	6145	-0.02	ME
AU	Phe	WP	3	45292.666	0.30666	0	:	0.668	0.15	66.6	4536	4780	0.02	WD
BM	Phe		5	48500.201	0.413627	1								
BQ	Phe		5	48500.1942	0.436968	1								
VZ	Psc	AP	1	50719.6286	0.26125918	22	v	0.800	0.00	47.0	4500	4700	0.02	WD
AQ	Psc	A	2	49283.3292	0.4756056	1	:							
DS	Psc		4	50376.4349	0.342487	1	:						-0.01	
V1	Psc	AT	4	51469.4403	0.366139	6								
V2	Psc	B?	4	52185.0022	0.316657	1							0	
RW	PsA	A	3	46675.6954	0.36045074	6	v	0.813	0.07	77.4	5600	5325	0	WD
TY	Pup	AP	3	49817.5382	0.8192416	14		0.326	0.63	67.8	7800	7658		WD
HI	Pup		4	48500.28	0.432567	6	:							
V405	Pup		5	48500.047	1.56711	1								
RZ	Pyx	EP	1	48466.8776	0.6562734	13	v	0.820	0.00	87.4	17000	16760	0	LTs
DK	Sge		5	51780.4016	0.6218262	4	v							
V1	Sge		4	52122.66	0.369	1							0	

Table 2. (continued)

Name		q_{sp}	M^* [$M_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
V453	Mon				06:50:39	-02:22:07			11.10	11.80	6	
V514	Mon				06:49:18	-00:03:33			12.80	13.30	6	
V524	Mon				06:59:01	02:12:51			14.40	15.20	124	
V530	Mon				07:03:16	03:14:54			12.40	12.80	6	
V532	Mon				07:01:57	-00:16:30			12.20	12.80	6	
V714	Mon				06:29:12	04:44:40			11.83	12.42	107	
V752	Mon			F0	07:07:57	-04:40:40	6.98	7.01	6.98	7.01	78	H,mv
V753	Mon	0.970	2.933	A8V	07:10:58	-03:52:43	5.24	1.04	8.30	8.81	250	
V1	Mon				06:58:11	10:13:58			12.50	12.90	29	
TV	Mus	0.119	1.400	F8V	11:39:58	-64:48:59			11.00	11.30	118	
BR	Mus			B4V	12:04:52	-72:52:12			10.64	11.28	157	
UZ	Oct			F3V	04:43:36	-84:48:40	3.79	0.81	9.03	9.56	159	
DE	Oct			A9IV	20:19:19	-76:07:36	4.39	1.03	9.19	9.27	78	H,mv
V502	Oph*	0.371	1.511	F7V	16:41:21	00:30:27	11.84	1.17	8.34	8.84	178,19	ms
V508	Oph	0.520	1.509	F9V	17:58:49	13:29:46	7.68	2.14	10.06	10.69	156,19	
V566	Oph*	0.241	1.743	F1V	17:56:52	04:59:15	13.98	1.11	7.46	7.96	19,279	
V839	Oph*	0.305	2.032	F7V	18:09:21	09:09:04	8.09	1.44	8.80	9.39	247,13	
V2201	Oph				17:44:01	03:44:54			14.50	14.80	20	
V2203	Oph				17:44:41	04:25:12			11.60	12.00	217	
V2357	Oph				16:57:17	10:59:51	5.37	2.01	10.67	10.79	78	H
V2377	Oph	0.395	0.487	G0/1V	17:33:56	08:09:58	10.09	1.22	8.60	8.73	175	H
V2382	Oph			B3Vne	17:40:24	-28:55:24	1.23	1.03	7.26	7.29	78	H
V2388	Oph	0.186	1.926	F3V	17:54:14	11:07:50	14.72	0.81	6.25	6.55	249,238	mv
ER	Ori*	0.640	2.503	G2V	05:08:51	-08:37:00	-6.68	2.16	9.28	10.01	96	mv
FZ	Ori			G0	05:41:21	02:36:23			10.70	11.30	83	
V343	Ori			F1	06:05:02	12:33:30			10.50	11.00	202	
V1353	Ori				05:40:58	-00:42:46			12.90	13.21	300	
V1363	Ori			F8V	05:07:02	-00:47:33	9.47	2.36	10.30	10.51	102	
V1387	Ori			A3V	05:55:47	-07:38:11	3.9	1.12	8.77	8.87	78	H,mv
BF	Pav			G8V	18:45:36	-59:38:42			11.00	11.90	104	A
HY	Pav			K1V	20:23:47	-73:42:12			11.42	12.16	158	A
LT	Pav			F8V	19:48:36	-71:01:30			11.40	12.20	59,58	A
MW	Pav			A7V	20:46:28	-71:56:58	4.8	1.08	8.51	8.95	151	
V386	Pav			A9V	20:55:58	-65:25:58	7.14	1.01	8.39	8.49	139	H
U	Peg	0.315	1.322	G2V	23:57:58	15:57:10	7.18	1.43	9.23	10.07	309,19	
BB	Peg	0.360	1.862	F5V	22:22:57	16:19:28	3.02	2.26	10.80	11.48	174,57	
BX	Peg*	0.376	1.409	F8V	21:38:49	26:41:34			11.00	11.69	135,265	A
V351	Peg	0.360	2.214	A8V	23:25:25	15:41:19	7.34	0.92	8.00	8.31	251,102	H
V357	Peg			F5	23:45:35	25:28:19	3.13	1.21	9.01	9.48	307	
V1	Peg				23:32:33	10:33:21			12.15	12.40	198	
KN	Per			A5	03:22:36	41:19:55	6.52	3.49	11.52	12.12	94	
V432	Per				03:10:11	42:52:09			11.00	11.70	1	
V579	Per			A0	03:39:12	41:16:58	4.43	0.89	7.87	7.94	78	H
YZ	Phe			K3V	01:42:26	-45:56:54			12.70	13.20	269	A
AD	Phe			G2V	01:16:38	-39:42:31	5.85	1.84	10.27	10.80	186,299	
AE	Phe	0.461	1.975	F8V	01:32:33	-49:31:41	20.49	0.81	7.56	8.25	182,19	
AU	Phe				01:50:23	-46:58:28			12.50	13.00	152	
BM	Phe			F3/F5V	00:18:46	-39:40:38	4.77	1.17	9.26	9.53	139	H
BQ	Phe			F3/5V	00:25:24	-46:55:27	1.86	2.08	10.47	10.59	78	H
VZ	Psc	0.800	0.602	K0-5V	23:27:47	04:51:13	16.77	2.07	10.20	10.45	132	
AQ	Psc	0.226	1.662	F8	01:21:04	07:36:22	8.03	1.29	8.68	9.02	174	
DS	Psc				00:58:52	03:03:58			11.75	12.18	286	
V1	Psc				00:36:28	21:32:14			10.86	11.32	284	
V2	Psc				00:59:50	12:25:04					21	
RW	PsA			G6V	22:09:47	-27:04:02			11.05	11.76	177,63	
TY	Pup			A7V	07:32:46	-20:47:31	1.97	1.01	8.40	8.89	178,28	
HI	Pup				07:33:38	-50:07:25	5.36	1.20	10.70	11.00	140	
V405	Pup			A0V	07:57:15	-14:31:07	0.59	1.15	8.72	8.92	139	H
RZ	Pyx	0.820	10.45	B7V	08:52:04	-27:29:01	2.71	1.06	8.98	9.84	24	
DK	Sge				20:14:01	21:22:12			12.20	13.20	255	A
V1	Sge				20:07:55	17:31:16			12.50	13.19	233	

Table 2. (continued)

Name		Type	G	JD^0_{hel}	Period [days]	n	N1	q_{ph}	f	i [°]	T_1 [K]	T_2 [K]	ΔM	N2
V743	Sgr	WT	3	48393.8206	0.2766358	8	:	0.319	0.10	82.9	5116	5459	-0.07	WD
V902	Sgr	WT	3	49191.9538	0.29394568	4	:	0.120	0.43					WD
V4408	Sgr	E	5	48500.6183	1.48934	1								
V701	Sco	EP	1	48072.9588	0.76187639	12		0.990	0.63	65.0	23500	23300		W3
V1084	Sco		5	48500.0788	0.303312	1							0	
BE	Scl		5	48500.267	0.422901	1							0	
FG	Sct	WT	3	44759.9733	0.27057193	4	:	0.786	0.08	89.9	4800	4662	0	WD
RS	Ser	B?	4	48484.7388	0.5981434	2	v							
AU	Ser*	BP	1	51648.8907	0.3864953	18	v!	0.700	0.09	80.6	5100	4780	-0.05	WD
OU	Ser	WP	1	52052.5487	0.2967645	3	:	0.173	0.31	74.3	5960	6380		WDs
Y	Sex	AT	1	50904.3848	0.41981633	29	v	0.174	0.00	76.8	7030	6760	0	LT
V1	Sex		4	52015.4354	0.44342	1								
RZ	Tau*	AP	1	51586.7343	0.4156763	28	v!	0.362	0.33	82.7	7300	7098	0	DJ
WY	Tau		5	50854.9719	0.69276066	2	v							
AH	Tau*	AT?	3	52278.4347	0.33267167	15	v!	0.502	0.09	4.29	5890	5866		WD
CT	Tau	EP	3	51811.8938	0.6668249	4	v	1.000	0.98	80.5	23100	23114	0	WDp
CU	Tau		4	51185.5224	0.412538	19	v							
EQ	Tau*	AT	1	52219.5496	0.3413469	30	3b?	0.442	0.12	86.6	5860	5851	0	WDs
V781	Tau	WP	1	51960.3021	0.34490852	35	v	0.405	0.23	65.4	5861	5950	-0.03	WDs
V1022	Tau		4	46327.6256	0.3471783	0	:							
V1112	Tau		4	51140.5251	0.4238323	7								
V1188	Tau		4	51157.06	0.574	1	::							
AB	Tel		4	45885.4568	0.3259648	3	::							
AK	Tri	A	4	50416.4163	0.7017	1	::						0	
AQ	Tuc	AP	1	48500.6717	0.59487655	11	v	0.270	0.44	80.2	6900	7113	0.02	W3
DX	Tuc		5	48500.254	0.377111	1								
W	UMa*	WP	1	51597.6874	0.3336355	379	v!	0.471	0.32	82.9	5800	6194	0.04	W3
TY	UMa*	W	3	51990.4414	0.35454821	50	v!	0.430	0.27	80.4	5650	5892	0.01	L2
UY	UMa	WP	3	51247.3356	0.37601846	16	v:	0.134	0.05	72.8	5500	5900	-0.03	WD
AA	UMa	WP	1	49840.3925	0.468126	15	v	0.551	0.15	80.3	5932	6030	0.05	WD
AW	UMa*	AT	1	52311.8198	0.4387259	127	3b?	0.080	0.85	78.3	7175	7022	0	WDs
BM	UMa	WT	3	50953.5256	0.27122061	8	+	0.540	0.17	89.5	4600	4982	0.01	WD
ES	UMa		4	52042.3879	0.52889805	2	::						0	
HH	UMa		5	48500.155	0.375494	1	:							
HN	UMa		5	48500.0781	0.382608	1								
HV	UMa	AP	1	51346.743	0.7107523	1	:	0.190	0.77	57.3	7300	7000		BS
HX	UMa	P	5	48500.372	0.379156	1								
II	UMa	A	2	48500.083	0.82522	1								
BP	Vel	W	3	47234.7005	0.26498517	6	:	0.532	0.14	82.1	5000	4717	0.05	WD
BU	Vel	A	3	41013.387	0.5162854	2		0.251	0.61	84.9	7500	7448	0	WD
FM	Vel	WT	4	46121.6439	0.38958	5	:						0	
OQ	Vel		5	48500.2773	0.581338	1								
V353	Vel		5	48500.1568	0.495252	1								
AG	Vir	BT	1	51301.743	0.64265069	68	v	0.317		90.0	7400		-0.09	L2
AH	Vir*	WT	1	51301.5569	0.40752757	110	3b	0.342	0.24	86.5	5400	5783	0.04	W3
AW	Vir	A	3	52001.7009	0.35399705	19		0.675	0.02	83.0	6000	5980	-0.01	WD
AZ	Vir	WP	3	51262.4976	0.3496643	19		0.500		69.7	6100	5800		EL
CX	Vir	BT	1	48766.467	0.7460771	1		0.340	0.00	82.8	6500	4513	0	L2
GR	Vir	AT	2	52464.3366	0.3469695	14								
HT	Vir	A	1	48760.4637	0.4076721	4	:			90.0	6100	6075		EL
IR	Vir	A	3	49825.5495	0.36942	1	::	0.550	0.02	79.8	6620	6600		BM
KZ	Vir	B	2	48500.3165	1.1318325	1								
NN	Vir	AP	2	50595.3467	0.48071484	5	:						0	
BI	Vul	WP	3	51483.4412	0.25181645	8	:	0.692	0.29	78.8	4600	4549	0.05	WD
BK	Vul		5	50392.267	0.4534679	3	:							
NO	Vul		5	51081.3473	0.37076561	7								

Table 2. (continued)

Name		q_{sp}	M^* [$M_\odot$]	sp.	α_{2000}	δ_{2000}	π [mas]	σ_π [mas]	V_{max}	V_{min}	Ref	N3
V743	Sgr			G8/K0V	17:43:56	-28:28:42			13.19	13.83	258	
V902	Sgr			G9V	19:25:16	-29:08:54			14.40	14.80	256	
V4408	Sgr			B7III	18:54:18	-19:55:59	-0.37	1.20	8.29	8.38	78	H
V701	Sco	0.990	15.3	B2V	17:34:24	-32:30:16	0.86	1.31	8.63	9.05	23	
V1084	Sco			G6V	17:37:57	-39:11:23	11.16	1.32	9.07	9.20	78	H
BE	Scl			F8	01:21:33	-29:07:53	9.76	5.11	10.37	10.83	139	H
FG	Sct			K2V	18:44:57	-06:05:30			13.66	14.76	50	A
RS	Ser			F5	18:17:18	-13:03:30			10.80	11.50	288	A
AU	Ser*	0.710	1.510	K0V	15:56:49	22:15:07			10.90	11.80	136,131	A
OU	Ser	0.173	0.640	F9/G0V	15:22:43	16:15:41	17.3	1.00	8.25	8.42	250,224	
Y	Sex	0.183	0.747	F8	10:02:48	01:05:40	9.02	3.38	9.02	9.38	119,19	
V1	Sex				10:50:30	-02:41:43			9.01	9.35	160	
RZ	Tau*	0.540	2.458	A8V	04:36:38	18:45:18	5.74	1.85	10.08	10.71	76,19	
WY	Tau			B9	05:56:26	26:18:36			11.14	11.73	52	A
AH	Tau*			G1V	03:47:12	25:07:00			11.25	11.92	170	A
CT	Tau			B2V	05:58:50	27:04:42			10.34	11.12	216	
CU	Tau				03:47:37	25:23:12			11.50	11.92	8,52	A
EQ	Tau*	0.442	1.749	G2V	03:48:13	22:19:24			10.50	11.03	251,224	A
V781	Tau	0.405	1.211	G0V	05:50:13	26:57:43	12.31	1.35	8.90	9.30	173	
V1022	Tau				04:07:29	27:51:36			14.45	15.25	214	A
V1112	Tau				04:34:25	08:22:02			13.10	13.72	99	
V1188	Tau				03:45:36	24:30:01			11.85	12.30	144	C
AB	Tel				18:37:36	-50:57:48			13.40	14.10	278	A
AK	Tri				02:24:39	33:15:58			11.80	12.21	103	
AQ	Tuc	0.354	2.389	A9V	00:17:21	-71:54:57	0.9	1.20	9.91	10.48	116	
DX	Tuc			F7IV/V	23:57:22	-64:14:36	7.4	1.12	9.61	9.90	139	H
W	UMa*	0.488	1.653	G2V	09:43:45	55:57:09	20.17	1.05	7.75	8.48	113,19	
TY	UMa*			G1V	12:09:03	56:01:55			11.48	12.14	166	
UY	UMa				13:44:38	55:13:18			12.70	12.90	306	
AA	UMa	0.564	1.906	F9V	09:46:59	45:45:56			10.88	11.58	292	
AW	UMa*	0.080	1.815	F2V	11:30:04	29:57:53	15.13	0.90	6.83	7.13	220	
BM	UMa			K0V	11:11:20	46:25:49			13.80	14.75	263	
ES	UMa				09:54:29	69:13:22			10.99	11.38	190	
HH	UMa			F8V	11:04:48	35:36:27	3.7	1.78	10.58	10.80	78,221	H
HN	UMa			F8	11:15:56	37:38:35	5.81	1.39	9.90	10.02	139	H
HV	UMa	0.190	1.966	A2V	11:55:38	47:15:27	3.12	1.23	8.69	8.97	65	
HX	UMa			F6II	12:01:33	43:02:30	6.68	3.01	8.89	9.06	139	H
II	UMa	0.172	2.180	F5III	12:32:55	54:47:43	5.04	1.81	8.17	8.48	249	H,mv
BP	Vel			K1V	08:18:07	-45:23:30			12.55	13.40	158	A
BU	Vel			A8V	08:40:06	-42:49:44			10.49	11.07	279	
FM	Vel				09:47:42	-53:28:18			12.43	13.10	152	
OQ	Vel			A3IV	08:46:23	-52:50:37	5.37	0.62	7.74	7.77	78	H,mv
V353	Vel			A3IV/V	10:45:42	-41:29:51	3.38	0.83	7.69	7.74	78	H
AG	Vir	0.317	2.118	A8V	12:01:35	13:00:30	1.33	1.18	8.35	8.93	25	
AH	Vir*	0.420	1.889	G2V	12:14:21	11:4909	10.86	3.11	8.89	9.49	135,19	mv
AW	Vir			G0V	13:27:33	03:02:28			10.92	11.63	158	
AZ	Vir				13:43:26	04:36:57			10.74	11.37	91	
CX	Vir	0.340	1.370	F5V	14:09:27	-15:34:54			9.80	10.45	117	
GR	Vir	0.122	1.496	F7-8V	14:45:20	-06:44:04	18.83	1.18	7.80	8.25	247,56	
HT	Vir	0.812	2.285	F8V	13:46:07	05:06:56	15.39	2.72	7.06	7.48	175,290	mv,ms
IR	Vir			F5V:	12:38:08	-03:59:18			12.10	12.80	98	
KZ	Vir	0.848	1.681	F7V	13:12:23	02:39:14	6.53	0.93	8.45	8.51	251	H
NN	Vir	0.491	1.991	F0/1V	14:19:38	05:53:47	9.48	1.14	7.64	8.01	247,101	H
BI	Vul			K3	21:22:49	27:02:00			14.15	14.90	50	A
BK	Vul				21:25:24	27:51:30			12.80	13.50	4	
NO	Vul				19:34:40	20:36:38			13.40	14.20	255,227	

6. Remarks

AB And: Possible third body in the system with $P \approx 60$ years indicated in the (O-C) diagram.

BX And: Brighter component of the visual double ADS 1671. Separation 19.7". Possible presence of the third body on about 60 years orbit seen in the (O-C) diagram.

SS Ari: Possible quadruple system. The third body seen in the (O-C) diagram on $\approx$44.8 years orbit. Possible fourth component on 28 years orbit.

AP Aur: Fast period increase since the beginning of the observations (1901) with mean $\dot{P}/P = +2.12\ 10^{-6} year^{-1}$. The (O-C) residuals deviate from the parabolic representation.

44i Boo: Fainter component of the visual double ADS 9494. The orbital period of the visual pair 206 years.

TU Boo: Abrupt period decrease $\Delta P/P = -1.52\ 10^{-5}$ around 1983.

TY Boo: Possible presence of the third body indicated by the sinusoidal variation ($P \approx 65$ years) seen in the (O-C) diagram.

TZ Boo: Two abrupt period changes around 1979 ($\Delta P/P = -2.45\ 10^{-5}$) and around 1992 ($\Delta P/P = +3.27\ 10^{-5}$).

VW Boo: Secular period decrease $\dot{P}/P = -4.97\ 10^{-7} year^{-1}$ since the beginning of the observations (1938).

XY Boo: Fast period increase since the beginning of the observations (1944) with mean $\dot{P}/P = +1.56\ 10^{-6} year^{-1}$. The (O-C) residuals deviate much from the parabolic representation.

AC Boo: Abrupt period increase $\Delta P/P = +2.32\ 10^{-5}$ around 1980.

CK Boo: Abrupt period increase $\Delta P/P = +2.0\ 10^{-5}$ around 1990.

V366 Cas: Period increase since the beginning of the observations (1911) with mean $\dot{P}/P = +5.27\ 10^{-7} year^{-1}$. The (O-C) residuals deviate much from the parabolic representation.

V523 Cas: presence of the third body on $\approx$101 years seen in the (O-C) diagram.

VW Cep: The system is probably quadruple - $P_3 = 31.4$ years, $e_3 = 0.771$, $P_4 = 18.6$ years, $e_4 = 0.499$.

CV Cyg: Period decrease since the beginning of the observations (1898) with mean $\dot{P}/P = -4.43\ 10^{-7} year^{-1}$ or two abrupt period decreases around 1930 and 1975.

V1073 Cyg: Period decrease with mean $\dot{P}/P = -4.88\ 10^{-7} year^{-1}$ since the first photoelectric observation (1962). Old photographic observations give the impression of the sinusoidal period change.

EF Dra: Third component spectroscopically detected. Possible variation in the (O-C) diagram. Object discovered as X-ray source.

UX Eri: Irregular period variation.

YY Eri: Sinusoidal variation seen in the (O-C) diagram interpreted as continuous mass transfer combined with LITE or cyclic magnetic activity. Abrupt period changes are another possibility.

AK Her: Brighter component of the visual double ADS10408. Separation 4.7". Quasi-sinusoidal period variation with two or more periodicities.

DF Hya: Period increase since the beginning of the observations (1935) with mean $\dot{P}/P = +4.24\ 10^{-7} year^{-1}$ or abrupt period increase $\Delta P/P = +1.76\ 10^{-5}$ around 1965.

EZ Hya: Fast period decrease since the beginning of the photoelectric observations (1969) with mean $\dot{P}/P = -1.46\ 10^{-6} year^{-1}$. The (O-C) residuals deviate from the parabolic representation.

SW Lac: presence of two other components in the systems seen in the (O-C) diagram with 23 and ≈90 years orbital periods. Multiplicity of the system confirmed by spectroscopic observations.

XY Leo: Multiple system. The third component on the P ≈20 years orbit is a BY Dra binary with the orbital period 0.805 days.

AM Leo: Brighter component of the visual double ADS 8024. Separation 11.3". Possible presence of the third body indicated by the sinusoidal variation ($P \approx 33$ years) seen in the (O-C) diagram.

V502 Oph: The third body detected spectroscopically. A continuous decrease and a probable sinusoidal oscillation with a period of 35 yr in the (O-C) diagram.

V566 Oph: Abrupt period increase $\dot{P}/P = +1.41\ 10^{-5}$ around 1972. Latest (O-C) residuals deviate from the linear representation.

V839 Oph: Orbital period seems to be modulated by more than one mechanism.

ER Ori: Member of multiple system. The brighter component of IDS 05065-00840. Separation 13.6". Another component detected by speckle interferometry 0.19" distant. Complicated (O-C) diagram.

BX Peg: Period decrease since the beginning of the observations (1926) with mean $\dot{P}/P = -2.38\ 10^{-7} year^{-1}$. Since 1986 period seems to be approximately constant.

AU Ser: Abrupt period decrease $\Delta P/P = -1.49\ 10^{-5}$ around 1988.

RZ Tau: Variable period increase since the beginning of the observations (1916) with mean $\dot{P}/P = +2.37\ 10^{-7} year^{-1}$.

AH Tau: Abrupt period decrease $\Delta P/P = -1.17\ 10^{-5}$ around 1974. The (O-C) residuals before the change deviate from the linear representation.

EQ Tau: Possible third body ($P \approx 50$ years) indicated by the course of the (O-C) residuals.

W UMa: Complicated quasi-periodic change of the period since the beginning of the observations (1902).

TY UMa: Period increase since the beginning of the observations (1933) with mean $\dot{P}/P = +7.13\ 10^{-7} year^{-1}$ or two abrupt period increases, the second around 1981.

AW UMa: Variation seen in the (O-C) diagram interpreted as LITE or two abrupt period decrease. Presence of third body indicated by the systemic velocity changes.

AH Vir: brighter component of the visual double ADS 8472 with ≈1280 years orbit. Presence of the third body on 11.2 years orbit seen in the (O-C) diagram.

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