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STATISTICAL STUDIES OF VISUAL DOUBLE AND MULTIPLE STARS. II. A CATALOGUE OF NEARBY WIDE BINARY AND MULTIPLE SYSTEMS

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RESUMEN

Se presenta un catálogo de sistemas dobles y múltiples abiertos cercanos al Sol. El catálogo contiene 305 binarias, 26 triples y 3 cuádruples, situadas a distancias del Sol de 22.5 pc o menos ($\pi \geq 0.044''$) y con separaciones mutuas mayores que 25 AU. El catálogo contiene datos astrométricos, fotométricos y cinemáticos actualizados, así como información sobre la posible pertenencia de los sistemas a grupos cinemáticos. También proporciona una clasificación de éstos en dos grupos de edad: el grupo de los sistemas probablemente viejos (POS) y el de los probablemente jóvenes (PYS). El catálogo está basado en el Catálogo de Estrellas Cercanas de Gliese, y contiene información adicional del LDS y el NLTT de Luyten. Se muestra que el catálogo está razonablemente completo hasta magnitud visual absoluta 13 en un volumen de 13 pc de radio. Se llevan a cabo algunas pruebas para excluir en la medida de lo posible a las compañeras ópticas. Entre las 305 binarias se encuentran 211 POS y 94 PYS, y entre las 29 múltiples 12 POS y 17 PYS. Se calculan las dispersiones de velocidad espacial para los dos grupos, y se encuentran diferencias significativas entre ambos. La dispersión de velocidades para el grupo de las jóvenes es σ_v(PYS) = 35.2 km s^{-1}, y la del grupo de las viejas es σ_v(POS) = 53.7 km s^{-1}. Las edades cinemáticas que corresponden a estas dispersiones son τ(PYS) = 1.9 $\times$ 10^9 años, y τ(POS) = 4.6 $\times$ 10^9 años, respectivamente. Se encuentra que 32 sistemas probablemente pertenecen al supercúmulo de las Híadas y 14 al de Sirio. Se calcula que la fracción intrínseca de sistemas dobles y múltiples con respecto a las estrellas de campo es aproximadamente 0.2 para el entorno solar.

ABSTRACT

A catalogue of nearby wide double and multiple systems is presented. It contains 305 binaries, 26 triples and 3 quadruples closer to the Sun than 22.5 pc ($\pi \geq 0.044''$) and with mutual separations larger than 25 AU. The catalogue includes updated astrometric, photometric and kinematic data, as well as information on possible membership to moving groups, and an age classification into probably young (PYS) and probably old systems (POS). The basis for this list is Gliese's Catalogue of Nearby Stars, with additional information from Luyten's LDS and NLTT. The catalogue is found to be reasonably complete to absolute visual magnitude 13 in a volume of radius 13 pc. Several tests were performed in order to exclude as far as possible optical members. Among the 305 binaries 211 POS and 94 PYS were found, and among the 29 multiple systems 12 POS and 17 PYS. Space velocity dispersions have been calculated for the systems classified as probably old or young. Significant differences between both groups are found. The velocity dispersion found for the young group is σ_v(PYS) = 35.2 km s^{-1}, while that of the old group is σ_v(POS) = 53.7 km s^{-1}. The kinematic ages corresponding to these velocity dispersions are τ(PYS) = 1.9 $\times$ 10^9 yrs, τ(POS) = 4.6 $\times$ 10^9 yrs. 32 systems are probable members of the Hyades supercluster and 14 of Sirius. The intrinsic fraction of wide double and multiple stars to field stars is about 0.2 in the solar vicinity.

Key words: **BINARIES - VISUAL — CATALOGS — SOLAR NEIGHBORHOOD — STARS - KINEMATICS — STARS - STATISTICS**

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1. INTRODUCTION

It is well known that duplicity and multiplicity are general properties of field stars (Poveda, Allen, & Parrao 1982; Abt 1983), and that multiple systems provide information about the cosmogony of such systems and about the environment in which they move. The original distribution of energies (major semiaxes), angular momenta (eccentricities) and multiplicities is modified as the result of dynamical processes within the systems and also through their interactions with external perturbing masses (stars, clusters, molecular clouds, black holes, etc.). Furthermore, wide binaries and multiple systems (WBMS) may serve as sensors of the distribution of unknown matter in the galaxy. It is clear that the present characteristics of WBMS will depend, among other things, on their ages. The investigation here reported is part of a long-term effort aimed at understanding the interplay between the cosmogonical processes and their long-term dynamical evolution (see Poveda 1988 for references to previous work).

In recent years, various catalogues of wide binaries have been published (Upgren 1988; Duquennoy & Mayor 1991; Close, Richer, & Crabtree 1991; Wasserman & Weinberg 1991; Weiss 1991; Ryan 1992), but no attempt has been made to include all the known WBMS in the solar neighborhood, with updated information and with an age classification and supercluster membership.

The aim of this paper is to present a comprehensive and unbiased catalogue of nearby WBMS from which statistical correlations can be studied, in particular those involving the passage of time. The importance of considering an unbiased sample of stars can be seen when we compare the binaries from the Bright Star Catalogue (Hoffleit & Jaschek 1982, BSC) with those from Gliese's catalogues (GC) of nearby stars (Gliese 1969; Gliese & Jahreiss 1979, 1991). The BSC is strongly biased toward intrinsically bright stars, and therefore young stars are over-represented in it (relative to a complete sample in the solar vicinity). On the other hand, in GC, which contain all stars known within 25 pc, the large-proper-motion stars (mostly older stars) are over-represented. It is thus evident that if we are to investigate the dynamical evolution of WBMS, we cannot naively use systems from either the BSC or GC. What we have done in the present investigation is to attempt a compromise between completeness and a fair sample size.

To this end, we compiled a general catalogue of WBMS based on GC. The catalogue contains 305 binaries and 29 systems of higher multiplicity. The procedures used to compile the catalogue are discussed in § 2. The completeness of this sample as a function of limiting distance and absolute magnitude is discussed in § 3. In § 4 the membership of WBMS to moving clusters is studied. § 5 is devoted to the age classification. In § 6 the structure of the catalogue is described. § 7 presents some basic statistics of the catalogue, and § 8 summarizes this work. The catalogue itself is presented in the Appendix.

2. CONSTRUCTION AND SCOPE OF THE CATALOGUE

Abt & Levy (1976) and Abt (1983) have shown that there are two different groups of binaries, characterized by quite different mass spectra of the secondaries: those with periods larger than one hundred years follow van Rhijn's luminosity function (Salpeter's mass spectrum), while those with shorter periods follow an opposite trend, i.e. the smaller masses are less frequent. More recent work (Mazeh & Goldberg 1992), has confirmed this fundamental result. In order to avoid a mixture of systems from different cosmogonical processes we limit ourselves in the present investigation to those binaries that follow Salpeter's mass function (which most likely were formed as independent condensations); that is, we include in the catalogue only binaries (systems) with expected major semi-axes larger than 25 AU.

The original basis for this work was Gliese's catalogue of stars closer than 22.5 pc (Gliese 1969) and its supplement (Gliese & Jahreiss 1979). We first noted all the stars that were listed in the main catalogue as double or multiple; then we screened the notes looking for companions not mentioned in the main catalogue, as well as for additional information on the systems. Components listed as doubtful were not included in the present catalogue. When a primary was listed in the BSC the notes of this catalogue were checked for additional wide components. We also consulted the notes in Woolley's catalogue (Woolley et al. 1970) for the same purpose. A short list of very wide binaries recently published (Gliese & Jahreiss 1988) was also taken into account.

In an attempt to find more companions to Gliese's stars, we compared their positions and proper motions with the entries in Luyten's double star catalogue (Luyten 1941–1963, henceforth LDS) and Luyten's Two Tenths Catalogue (Luyten 1979, 1980, henceforth NLTT). The result of this exercise yielded 18 new systems and also allowed us to verify the physical reality of those extracted from Woolley's catalogue and from the BSC.

While the elaboration of the Catalogue was under way, NASA's Astronomical Data Center released a new, machine-readable, version of Gliese & Jahreiss's catalogue (1991), containing revised parallaxes, photometry, etc., and extending the distance surveyed to 25 pc. Unfortunately, this catalogue contains very few notes. For this reason, and also because the quality of the parallaxes deteriorates with increasing distance, we decided to restrict the volume studied to 22.5 pc, as before, but taking into account the information provided by the new catalogue. The end result is the present list, whose entries have been taken over from Gliese's Catalogues and, to a lesser extent, from their comparison with Luyten's LDS and NLTT.

A system will be considered to be a physical wide binary or multiple if it fulfills at least one of the following conditions:

(a) An orbit has been calculated and its elements are listed in the notes of any of the basic catalogues.

(b) Position angles and separations are quoted for more than one epoch in the basic catalogues, and their differences are consistent with orbital motions. Out of 127 pairs that have observations for two or more epochs, 11 were rejected.

(c) A system that has data only for one epoch in Gliese's Catalogues was retained unless it is classified as doubtful or optical in any other catalogue (BCS, Woolley, NLTT, etc.), or if the proper motion of its components (according to LDS or NLTT) indicated inconsistency with a physical pair.

(d) The system is registered as an LDS or a common proper motion pair in the NLTT.

Summing up, a system enters into the WBMS catalogue if it is nearer than 22.5 pc, has a separation among its components of at least 25 AU and is a physical system according to at least one of the preceding conditions. The procedure followed should yield a list containing very few optical components.

Since at least one component of the WBMS is a Gliese star, the distance to the system is known, and hence the separation in arc seconds can be converted to astronomical units. When an orbit is known, the major semiaxis in seconds of arc is listed. For most of the WBMS, only the separations, s, in seconds of arc are available; they can be converted statistically into expected major semiaxes by means of the relation

$$E(\log a) - E(\log s) = 0.146$$

The above formula was derived by Couteau (1960) on theoretical grounds, assuming a random distribution of the geometrical elements of the orbit, as well as random times of passage through periastron. It is worth noting that this theoretical relation is independent of the distribution of eccentricities. Although it was derived theoretically, Couteau also checked its observational validity using a group of 410 orbits, for which the constant turned out to be 0.150. It is not too different from the empirical relation derived earlier by Kuiper (1935) and widely used since, where the constant has a value of 0.11.

The catalogue is divided in three parts and listed in the Appendix; Table A1 contains the binaries, Table A2, the triples and Table A3, the quadruples. Systems nearer than 13 pc and whose primaries are brighter than $M_v = 13$ are marked with an asterisk; as will be explained below, they represent a quasi volume-complete sample.

3. COMPLETENESS OF THE CATALOGUE

For the purpose of investigating evolutionary effects in WBMS we need to have a sample which is not biased towards young or old objects. A volume-complete sample fulfills this requirement, but it is difficult to obtain even for field stars in general. In fact, it is well known that neither Gliese's nor Woolley's catalogues are volume-complete. Gliese, Jahreiss, & Upgren (1986) have investigated the degree of completeness of their catalogue, including its extensions, and find that it is complete to absolute visual magnitude 13 within a sphere of radius 13 pc. We have studied the limits of completeness of our catalogue of binaries by means of two criteria:

(a) by determining the space density of WBMS as a function of distance R to the Sun for various absolute magnitude intervals of the primaries;

(b) by calculating the average distance $\langle r \rangle$ to the stars nearer than a given limiting distance R. This average $\langle r \rangle$ is equal to $0.75R$ when the space density of stars is uniform. When incompleteness sets in, that is, when the density of catalogued stars begins to diminish with distance, $\langle r \rangle$ becomes smaller than $0.75R$.

Based on the above criteria, incompleteness for stars at the canonical maximum of the luminosity function M_v = 12–13 (Wielen, Jahreiss, & Krueger 1983) was found to set in at a distance of about 13 pc. For other limiting magnitudes, of course, the volumes of completeness are different. For the purpose of investigating dynamical effects, we need to strike a compromise between a fair degree of completeness and a reasonable number of systems for statistical analysis. Such a compromise may be achieved by taking the WBMS nearer than 13 pc. This set of stars, which will be referred to as the quasicomplete catalogue, will be the subject of special studies in future papers. In Tables A1, A2 and A3 the WBMS nearer than 13 pc and with primaries brighter than $M_v = 13$ are marked with an asterisk in field number one.

4. MEMBERSHIP OF WBMS TO MOVING GROUPS

Some of the WBMS are reported in the catalogues' notes as members of moving clusters, superclusters (SC) and groups, particularly the Hyades, Sirius and 61 Cygni groups. Apart of being a pioneer in the field, Eggen has been active for many years in the task of identifying moving groups and superclusters (see for instance Eggen 1987). Knowledge about membership to a given cluster is valuable because it provides an age indicator for the particular system, since we can assign to it the age of the cluster to which it belongs. Eggen has used various criteria to identify members of moving groups.

In principle, the identification of a particular star as a member of a given group should follow from a mere comparison of its spatial velocity with that of the cluster. Unfortunately, there are many cases in which the space velocity of the star under consideration is not known, and for these cases membership criteria in terms of the (incomplete) available data must be adopted. One possible criterion, suggested and applied by Eggen (1985), involves the total spatial velocity V_o of the group and the "peculiar velocity" V_p of the star, which is defined as:

$$V_p = V_o\ (\tau/v) \sin \lambda$$

where λ is the angular separation between the star and the convergent point of the cluster and v and τ are, respectively, the components of the proper motion of the star along the direction toward the convergent point at the position of the star, and orthogonal to it. According to Eggen, a star is considered to belong to the group if

$$V_p/V_o < 0.1 ,$$

a relation which may also be written as

$$\tan \theta \sin \lambda < 0.1 ,$$

where the angle θ is the difference between the position angle of the proper motion of the star and the position angle of the convergent point of the cluster at the position of the star (i.e., $\theta = 0$ means that the star is moving directly toward the convergent point of the cluster). The last expression shows that this criterion may be interpreted as a condition on θ weighted by the angular separation λ. In the following we will refer to it as the E (Eggen) criterion.

To apply the E criterion, one needs the coordinates of the convergent point of the SC and V_o , its space velocity relative to the Sun, as well as the position and the proper motion of the star under consideration. In the present catalogue however, we have additional information, since the distance to each WBMS —and, consequently, its tangential velocity V_T— are also known. Clearly, this information can be used to derive more rigorous membership criteria. In particular, we decided to adopt a criterion that asks for the simultaneous fulfillment of two conditions —one on the angle θ, and the other on the tangential velocity of the WBMS— i.e.,

$$\theta < \theta_o$$

and

$$|V_T - V_e| < \Delta V ,$$

where $V_e = V_o \sin \lambda$, the "expected" velocity, is the tangential velocity that a "perfect" member of the group (i.e., one with the same space velocity V_o as that of the group) would have at the position of the given WBMS, and where θ_o and ΔV are two arbitrary constants, to be discussed immediately, that determine the degree of precision of the criterion.

The problem now is to choose reasonable values for θ_o and ΔV. An obvious consideration that applies in both cases is that both constants should be small, to guarantee a high probability of membership, but large enough to allow for the internal velocity dispersion of the group and for the observational uncertainties in the proper motions and parallaxes. Let us consider first the value of ΔV. For the Hyades SC, Bubenicek, Palous, & Piskunov (1985) find a velocity dispersion of 7.7 km s^{-1}, and for the Sirius SC Palous & Hauck (1986) find 6.6 km s^{-1}. Therefore, we decided to take $\Delta V = 7$ km s^{-1}. As for θ_o, values as high as 27° (van Bueren 1952) and 31° (Wayman, Symms, & Blackwell 1965) have been adopted in the past —although these are by no means the rule— so that we decided to explore two possibilities: $\theta_o = 10°$ and $\theta_o = 20°$; note that a velocity dispersion of 7 km s^{-1} implies an angular deviation of 8.8° in the case of the Hyades cluster. In the following we will refer to the combination of each of these angles with the tangential velocity condition as the C-10 and C-20 criteria, respectively.

5. AGE CLASSIFICATION OF WBMS

In the present section we will establish an age grouping for the WBMS in the catalogue. We define two age groups: young and old. The dividing line is set, as a first approximation, at the age of the Sun. In general, a system will be classified as probably young (PYS), if any of its components satisfies at least one of the following criteria:

(1) It is a main sequence star of type earlier than F7.

(2) It has Hα emission.

(3) It is a flare star.

(4) Its rotational velocity $v \sin i$ is greater than 6 km s^{-1}.

(5) It is a member of a moving group or SC younger than the Sun.

(6) Its age has been determined from its chromospheric activity, Li abundance, etc., and it is younger than the Sun.

(7) The intensity of its H and K emission has been determined to be larger than zero (Wilson & Woolley 1970).

(8) The U, V components of its peculiar velocity ıtisfy a modified version of Eggen's definition of ɔung disk stars (Eggen 1969, 1989). Our limits are ł5 km $s^{-1} < U <$ +50 km s^{-1}, –28 km $s^{-1} < V$ +22 km s^{-1}, where U, V are referred to the LSR ıd U is positive towards the galactic center. These ımits were taken so as to include nearly all stars that ere found to be young according to the previous :ven criteria.

If none of the components of a WBMS satisfy the ɔove criteria, the system is classified as probably ld (POS). It should be clear that since most of the ars in the catalogue are faint, information about ıem is scarce; so, it is quite possible that a young ar has not been observed sufficiently to establish, ır instance, that it is an Hα emission object, or a are star. As a consequence, some of the systems lassified as old may indeed be young. It may also appen that an old late type close binary (not yet ɛcognized as such) is forced into fast rotation by dal effects and a degree of chromospheric activity ; induced in it which does not correspond to its ge (see for instance Soderblom 1990). Similarly, a oung binary may be slowed down prematurely by ıdes, reducing its surface activity to the point that : may be classified as "old". Therefore, the group f young WBMS may be contaminated by some old ystems, and viceversa.

The criteria of youth mentioned above are based n the following evidence.

(1) Jahreiss & Wielen (1983) have analyzed the elocity dispersion and the kinematical ages of arious groups of stars and concluded that stars arlier than F7 V have an age of about 10^9 years.

(2) The pioneer investigation of Delhaye (1953) ın the motions of the dMe stars in the solar vicinity, nd studies by Dyer (1954, 1956), Vyssotsky (1957), nd Vyssotsky & Dyer (1957) on the motions of 1 stars, have established that the Hα emission M tars are young objects. More recently, Giampapa ¿ Liebert (1986), Stauffer & Hartmann (1986), 'oung, Sadjadi, & Harlan (1987), and Upgren 1988), have confirmed this result. In order to ap-ıly this criterion, we consulted Joy & Abt (1974) and earched the literature (via SIMBAD Data Base) to dentify which systems have at least one Hα star.

(3) Haro (1968) and Haro & Chavira (1966) have :stablished the similarity between the flare stars in he solar vicinity and what they originally called lash stars in young clusters and associations. Haro ıas shown that both types of stars are young, as 'oung as the clusters and associations in which they ıppear. Furthermore Poveda & Allen (1994) have tudied the motions of the flare stars and find that heir kinematics correspond to that of a population vith an age of about 2×10^9 years. For our atalogue, information on flare activity was taken from Gurzadyan (1980), Pettersen (1991) and from the SIMBAD Data Base.

(4) In general, if a star rotates faster than the Sun, it should be younger. However, and mainly because of spectral resolution limitations, we have set the lower limit at 6 km s^{-1}. Data were taken from the BSC.

(5) We have already discussed membership to the Hyades and Sirius superclusters. Systems satisfying criterion C-10 have been classified as young. However, the uncertainties involved in the direction of the proper motion vectors and in the determination of the apices make it difficult, at present, to reject those systems satisfying only criterion C-20. Hence, we decided to keep track in the catalogue of possible SC membership of all the systems that satisfy criterion C-20, but we classified as young only those that satisfy criterion C-10.

(6) Several authors have determined numerical ages for individual stars based on the presence of chromospheric indicators like the intensity of the Ca II H and K reversals, the presence of Hα emission, and the intensity of the lithium feature. We made a literature search to find which of the components of WBMS have such age determinations, and we classified them accordingly (see for instance Barry, Cromwell, & Hege 1987; Barry 1988; Duncan 1981, 1984; Soderblom 1983, 1990).

(7) Wilson and Woolley (1970) have determined the intensities of the Ca II H and K emission lines of a large number of stars using an arbitrary intensity scale ranging from +8 to –5. Later, Wielen (1977) derived an age calibration for Wilson's intensity scale, assuming that the rate of star formation in the galactic disk has been constant in the last 10^{10} years. According to this calibration, stars with H and K intensities larger than zero are younger than the Sun. We have, therefore, taken as young those systems where at least one component has an H and K intensity larger than zero.

(8) The relation between kinematics and age of stars belonging to the galactic disk is well known. In particular, their location in the U, V plane is an age indicator. Eggen (1969) has found that on this plane "young disk stars" are bounded by the intervals –41 km $s^{-1} < U <$ +29 km s^{-1}, –28 km $s^{-1} < V <$ +22 km s^{-1}, with U, V referred to the LSR (U_0, V_0, W_0) = (9 km s^{-1}, 12 km s^{-1}, 7 km s^{-1}). For the WBMS that were classified as PYS according to the seven previous age indicators, we can define a "rectangle of youth" in the U, V plane. The plot is shown in Figure 1. In this figure we can see that our PYS are bound by –45 km $s^{-1} < U <$ +50 km s^{-1}, –28 km $s^{-1} < V <$ +22 km s^{-1}, where U, V are referred to the LSR and U is positive towards the galactic center. These bounds are similar to, but not identical with, Eggen's, because the age of

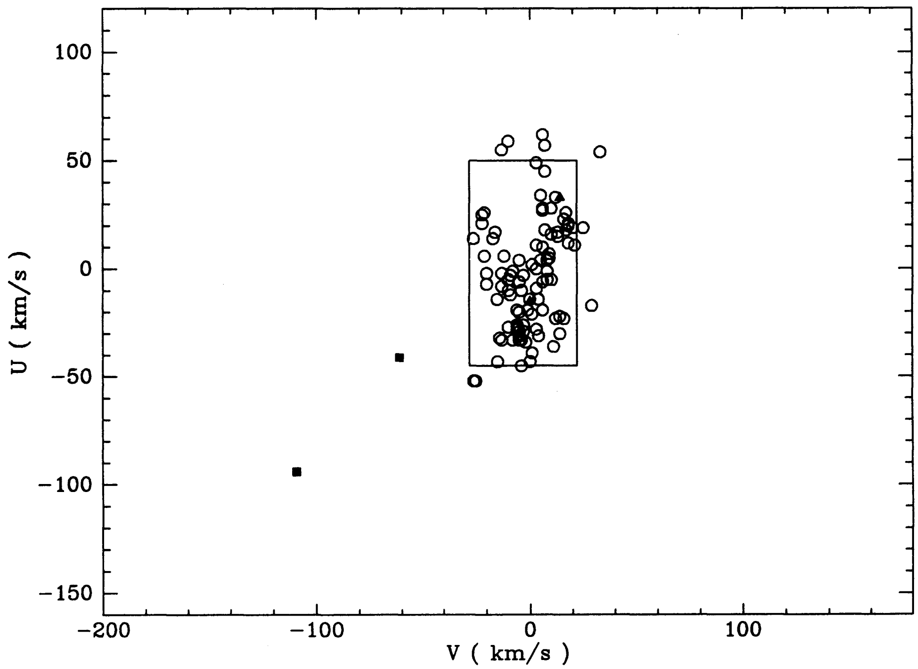


Fig. 1. The U, V plane for 101 young double and multiple stars. The rectangular region plotted is bound by -45 km s^{-1} $< U < +50$ km s^{-1}, -28 km s^{-1} $< V < +22$ km s^{-1} and encompasses the great majority of the young population. This region is referred to as the "rectangle of youth". Stars labelled as outliers of the distributions of velocity components U, V are plotted as squares, those of W, as triangles.

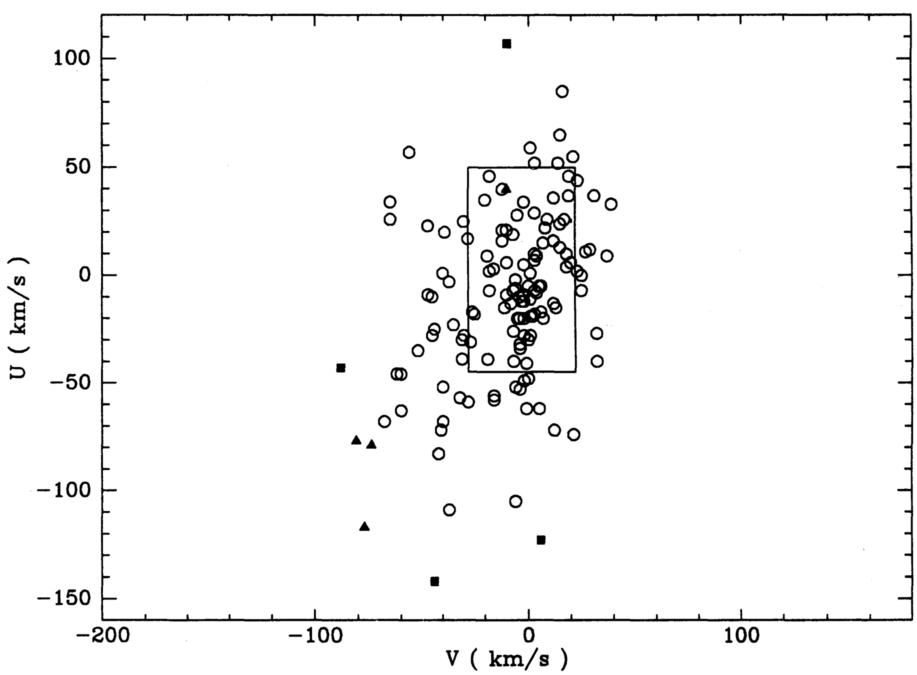


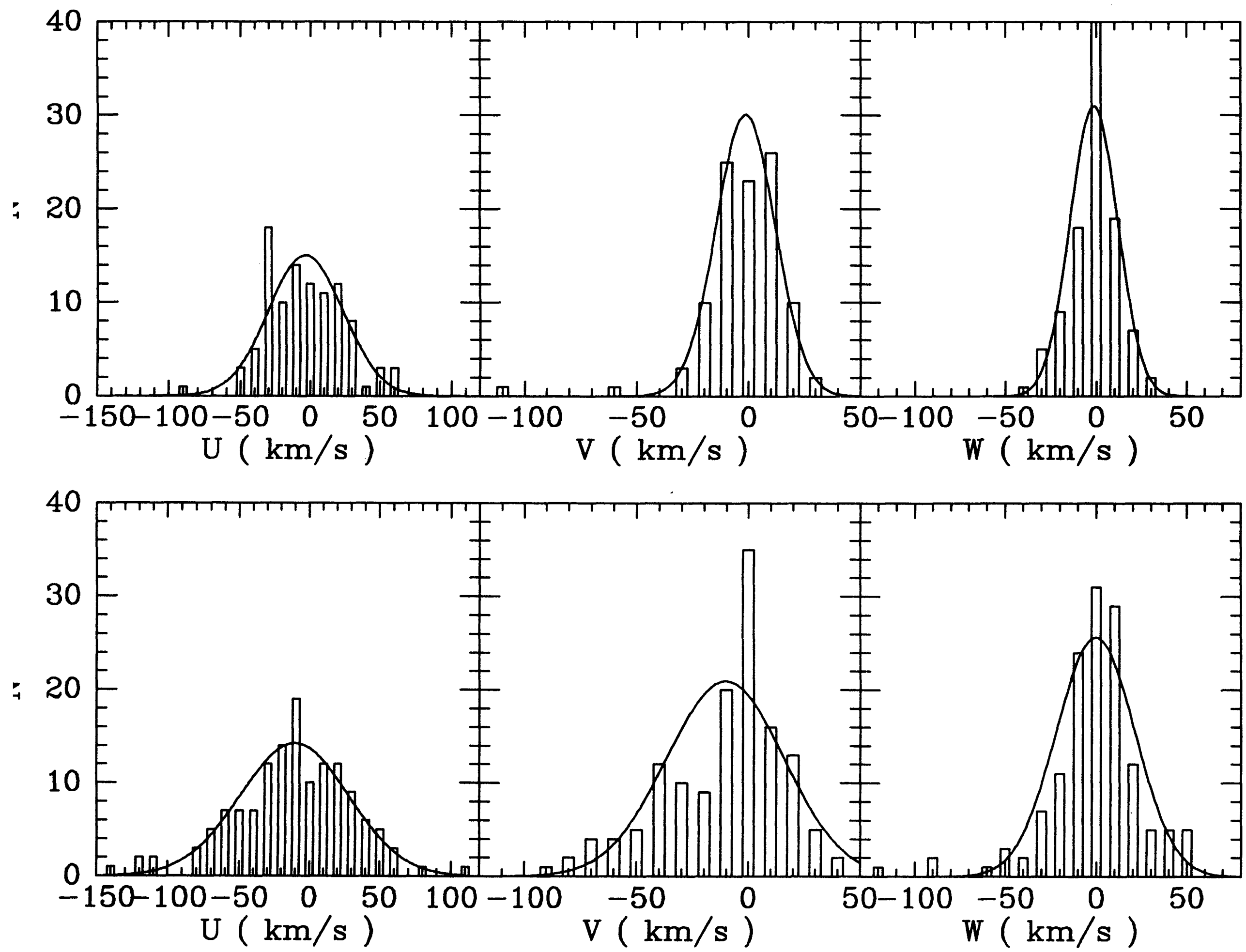
Fig. 2. The U, V plane for 138 old double and multiple stars. The rectangular region is the same as in Figure 1. Th older population is seen to scatter much beyond the rectangle of youth. Outliers are marked as in Figure 1.

ur PYS is larger than that of Eggen's "young disk :ars". Figure 2 shows the corresponding plot for ıe old stars. The difference between both plots is bvious. Our last age indicator is based on these esults. If a system lies outside the "rectangle of outh" it is classified as a POS, if it lies inside, as a YS. However, since the velocity distribution of the OS is Gaussian (as shown in Figure 3) a substantial umber of old systems will lie inside the "rectangle f youth". Therefore, this criterion is not as reliable n indicator of youth as the preceding ones, but it a good indicator of oldness.

In a few cases members of a WBMS have ontradictory age indicators. In order to assign an ge classification to those systems, we have given rogressively lower weights to the age indicators, :arting from a high weight for the first one, and nding with a very low weight for the last one. However, a few stars with extremely high velocities were assumed to be old, especially if their W component was large; this was the case for five stars. When the age classification is of marginal significance the field is marked with an asterisk; a question mark is used when the age indicators are contradictory.

Table 1 shows the numbers of binaries and multiple systems that were classified as PYS and POS by the first seven age criteria. The numbers given in parentheses take into account also the last age indicator, that is, they were determined using all eight age criteria.

As a test to the age classification, we have determined the velocity dispersions of the systems that were classified as PYS and POS according to the first seven criteria, to see if they show a significant difference. As in all velocity dispersion



ig. 3. (a) The distribution of velocities for 101 young double and multiple stars. The velocity components *U*, *V*, *W* are ıown, along with the Gaussian fits to each component. (b) Same as Figure 3a for 138 old systems. Comparison of the pper and lower plots shows clear kinematic differences between both groups.

TABLE 1

DISTRIBUTION ACCORDING TO AGE OF WIDE BINARIES AND MULTIPLES FROM THE CATALOGUE[a]

	Binaries	Multiples	Total
PYS	94 (151)	17 (22)	111 (173)
POS	211 (154)	12 (7)	223 (161)
Total	305 (305)	29 (29)	334 (334)

[a] The numbers shown in parenthesis take into account the kinematic age indicator (criterion 8).

determinations, care must be taken to avoid the excessive weight that a few outliers may have in the results. We proceeded as follows:

First, we verified that the velocity distribution of the WBMS is well approximated by a Gaussian function. Our sample comprises 239 systems, 101 PYS and 138 POS with all the data necessary to determine space velocities. Figures 3a and 3b show the U, V, W velocity distributions of the PYS and POS, respectively, along with the Gaussian fits. The plots show that the Gaussian fits are satisfactory. In such distributions, 68% of the population is expected to be contained within one σ of the mean. So, in order to estimate the dispersion for each velocity component, we determined how far we have to go from the mean in order to include 68% of the population. To improve this estimate, we also determined how far from the mean one has to go in order to include 90% of the population, which in a Gaussian distribution corresponds to 1.5 σ. Our percentile estimate for the dispersion of each velocity component was taken as the mean between these two estimates. The Gaussian fits shown in Figure 3 were adjusted to the total population of 101 PYS and 138 POS, and to the percentile estimate for the corresponding velocity dispersions of each component.

Then, to further test for consistency our values for the velocity dispersions, we labelled any system with one or more components lying outside 2.58 σ (with σ estimated as above) as an outlier and eliminated it before computing in the usual way (second moment) the velocity dispersions in each component. Note that in a Gaussian distribution, only 1% of the population lies beyond 2.58 σ; given the size of the sample, this procedure seems adequate. The number of WBMS thus eliminated was 4 PYS and 8 POS. Table 2 presents the velocity dispersions we obtained. Note the similarity between the values of the dispersion estimated by the percentile method and from the second moment of the distribution. This similarity can be taken as quantitative proof of the reliability of the Gaussian fits to the velocity distribution.

After eliminating outliers, the weighted velocity dispersions for each component were calculated following Wielen's (1974) method to obtain a result representative of the whole disk population. The weighted velocity dispersion of each group and the corresponding kinematic age, as determined from Wielen's (1977) relation, are

$$\sigma(\mathrm{PYS}) = 35.2\ \mathrm{km\ s^{-1}},\quad \tau = 1.9 \times 10^9\ \mathrm{years}.$$
$$\sigma(\mathrm{POS}) = 53.7\ \mathrm{km\ s^{-1}},\quad \tau = 4.6 \times 10^9\ \mathrm{years}.$$

Here the mean age τ for each group has been determined from Wielen's (1977) calibration of the age-velocity relation: $\tau = 1.67 \times 10^6\ (\sigma^2 - 100)$ years, with σ in km s^{-1}. A recent recalibration (Poveda, Cordero, & Herrera 1994) of the relation $\sigma(\tau)$ yields:

$$\tau(\mathrm{PYS}) = 4.3 \times 10^9\ \mathrm{years},$$
$$\tau(\mathrm{POS}) = 10.9 \times 10^9\ \mathrm{years}.$$

TABLE 2

ESTIMATES OF VELOCITY DISPERSION COMPONENTS FOR YOUNG AND OLD SYSTEMS, AFTER ELIMINATION OF OUTLIERS

	PYS				POS			
	σ_u	σ_v	σ_w	σ	σ_u	σ_v	σ_w	σ
	(km s^{-1})				(km s^{-1})			
Percentile	26.0	12.9	12.7	31.6	36.2	24.4	19.1	47.7
2nd. moment	26.4	12.7	12.1	31.7	35.8	24.0	20.2	47.6
W-weighted	29.4	14.7	12.6	35.2	40.7	27.4	21.9	53.7

The actual difference in the velocity dispersions .nd hence in the ages– of both groups should : even larger because, as already explained, the roneous allocation of young stars to the old group ıd viceversa will tend to decrease the contrast in e velocity dispersions. Thus, the real ages of the ⁄S should be smaller, and those of the POS larger, an the results just obtained.

THE CATALOGUE OF NEARBY WIDE BINARIES AND MULTIPLE SYSTEMS

The catalogue is listed in the Appendix in Tables l, A2 and A3 and it consists of the following parts: l, the catalogue of binaries. A2, the catalogue of iples. A3, the catalogue of quadruples.

Each catalogue is displayed in 17 fields. A deription of each field follows. Data in fields 4–12 ere taken from Gliese & Jahreiss (1991).

Field **1**. *Gliese*: Identification of the star(s) in liese & Jahreiss (1991, GJ91) version. An NN in ıis field denotes a new entry in GJ91. An asterk indicates that the system belongs to the quasi olume-complete sample as defined above.

Field **2**. *Add.id.*: Additional identification of the ar (system), when available, according to the folwing order of precedence: HR, HD, DM, Giclas, HS, identification in a catalogue not mentioned ere explicitly, LTT, LP, L, other. These identificaons, with the exception of the HR numbers, were ken verbatim from Gliese & Jahreiss (1991).

Field **3**. *LDS, NLTT*: Identification of the star ı Luyten's LDS or NLTT catalogues, in that order f precedence. If the star is identified in the LDS, e give its number preceeded by the letters "LDS". ' it was not found in the LDS catalogue, but was entified unambiguously in the NLTT, we give uyten's identification in the latter. If the NLTT ves no name to the star, we denote it by NLTT. he identifications were made by comparing the quatorial coordinates and their proper motions. Vhen this process was successful, we verified the lentification by checking the remarks in both DS and NLTT, and the consistency with the hotographic magnitudes and colors. An asterisk ıdicates that there is a note in the NLTT.

Field **4**. μ: Magnitude of the proper motion of ıe star in seconds of arc per year.

Field **5**. θ: Position angle of the proper motion f the star in degrees.

Field **6**. *RV*: Radial velocity of the star in km s^{-1}.

Field **7**. *Sp*: Spectral type of the star.

Field **8**. *V*: Apparent visual magnitude. In a few ıses it was calculated from Luyten's m_{pg} and m_R y the appropriate transformation. These cases are enoted by a *c*.

Field **9**. *B–V, U–B, R–I*: Color indices of the star.

Field **10**. *Gliese*: Identification as in field 1.

Field **11**. π: Resultant parallax of the star, defined as equal to the trigonometric parallax when its error is smaller than 14%, and as a weighted average of the trigonometric, photometric and spectroscopic parallaxes in all other cases.

Field **12**. M_v: Absolute visual magnitude of the star.

Field **13**. *SM*: Source of duplicity (multiplicity). This field gives the source from which we obtained the information on the duplicity (multiplicity) of the star, according to the following code: GL = Gliese (1969); GJ = Gliese & Jahreiss' (1979); GJ91 = Gliese & Jahreiss' (1991); LDS = Luyten's Double Star Catalogue; NLTT = Luyten's Catalogue of Stars with proper motions larger than 0.18″ per year.

Field **14**. *PD*: Pair description. This field identifies explicitly the components of the system whose characteristics are described in the next fields when the system's multiplicity is greater than two. An asterisk following the pair description indicates that there are significant differences between the reported values of the radial velocities or parallaxes of the two stars.

Field **15**. *a, Sep*: Major semiaxis or separation of the stars described in the previous field, in seconds of arc. When an orbit is known an *o* is attached to the value of the major semiaxis. In most cases the entry is the value given by the source of duplicity. When different sources gave different values, we adopted the value given by Gliese & Jahreiss (1991), and when discrepancies were found between the catalogues of Gliese (1969), Gliese & Jahreiss (1979) and Gliese & Jahreiss (1991), we adopted the value given with more significant figures.

Field **16**. *a, E(a)*: Major semiaxis of the orbit, or its expected value, in AU. An *o* means that the orbit is known. When there were discrepancies between different sources, the adopted value was chosen according to the rules described in the previous field.

Field **17**. *Memb.*: Membership to a kinematic group. An *H* or an *h* mean that the star is a possible member of the Hyades supercluster according to the C-10 or C-20 criterion, respectively. An h^* means that the star belongs to the Hyades according to one (or more) of the sources, but that it does not fulfill criterion C-10 or C-20. An *S*, an *s* or an s^* have exactly the same meaning with respect to the Sirius-Ursa Major supercluster. Membership to other kinematical groups was taken from the sources and identified with the following codes: 61C = 61 Cygni, zHer = ζ Herculis, Arc = Arcturus group, W630 = Wolf 630, eInd = ϵ Indi.

Field **18**. *Age ind.*: Age indicator. This field is divided in eight columns, one for each age indicator (age indicators are discussed in detail in the main text). A column may be empty or may contain a number or a letter, according to the following code: Column 1. A number 1 in this column means that the star is a main sequence star with a spectral type earlier than F7. In all other cases, the column is empty. Column 2. A number 2 in this column means that the star shows —or has shown— Hα emission. If it has not, or if there is no information, the column is empty. Column 3. A number 3 in this column means that the star has shown flares. If it has not or if there is no information, the column is empty. Column 4. A number 4 in this column means that the star has been reported to have a rotational velocity $v \sin i$ greater or equal to 6 km s^{-1}. In all other cases it is left empty. Column 5. An *M* in this column means that the star belongs to a kinematic group younger than the Sun. An *m* means that it belongs to a kinematic group older than the sun. Column 6. An *A* or an *a* in this column means that there exists a numeric, individual, determination of the age of the star, and that this determination indicates that it is younger or older than the Sun, respectively. Column 7. An *I* or an *i* in this column means that the star has H and K line emission intensities, larger or equal to zero or smaller than zero, respectively (for more details, see the main text). Column 8. A *K* or a *k* in this column means that the star is kinematically young or old, respectively, according to the velocity criterion (8) described in § 5.

Field **19**. *ASA*: Adopted system age. An *O* in this field means that the system falls ouside the rectangle of youth, or that after weighting the information in the preceding field it was decided that it is old. An *o* means that the star is considered old only by default, i.e., that no information to the contrary is available. Similarly, a *Y* means that the information in Field **18** (including column 8) indicates that the system is young. A question mark after an adopted age means that the age classification is uncertain. An asterisk indicates that the given age is of marginal significance.

7. SOME BASIC STATISTICS FROM THE CATALOGUE OF WBMS

It is of interest to examine some of the basic statistical properties of the sample of binaries and multiple systems collected in our catalogue. In the following we present a summary of such characteristics.

The distribution of apparent visual magnitudes for both the primary and the secondary components of the systems is shown in Table 3. Figures 4 and 5 are plots of these distributions. The distribution for the primaries is very broad, with most of them having apparent magnitudes between 5 and 12; the secondaries show a clear maximum, centered around magnitude 12–13.

TABLE 3

DISTRIBUTION OF PRIMARIES AND SECONDARIES ACCORDING TO VISUAL APPARENT AND ABSOLUTE MAGNITUDE[a]

Magnitude Interval[b]	NP(m_v)	NS(m_v)	NP(M_v)	NS(M_v)
-1 - 0	0	0	1	0
0 - 1	3	0	2	0
1 - 2	2	0	8	0
2 - 3	5	1	10	1
3 - 4	16	1	28	4
4 - 5	26	4	36	6
5 - 6	38	7	24	11
6 - 7	25	12	34	21
7 - 8	28	20	30	20
8 - 9	33	21	37	27
9 - 10	35	27	28	35
10 - 11	36	40	31	49
11 - 12	32	45	37	62
12 - 13	29	54	17	46
13 - 14	18	57	6	41
14 - 15	5	41	2	16
15 - 16	2	14	3	14
16 - 17	1	9	0	6
17 - 18	0	8	0	2
18 - 19	0	1	0	2
19 - 20	0	1	0	0

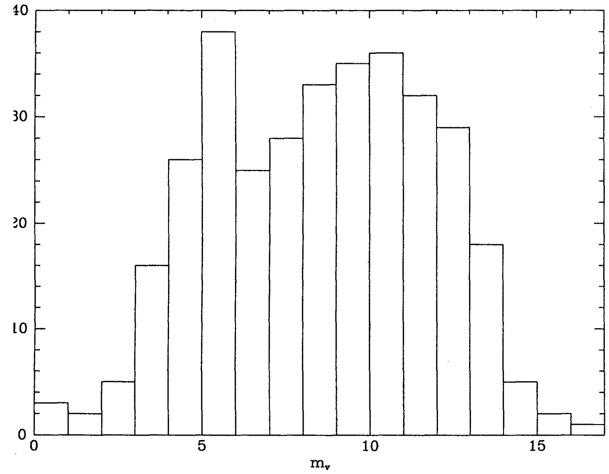
[a] For three secondaries there is no magnitude information.
[b] The magnitude intervals are to be understood as $-1 < \mathrm{mag} \leq 0$, etc.

TABLE 4

DISTRIBUTION OF PRIMARIES ACCORDING TO SPECTRAL TYPE AND LUMINOSITY[a]

	Spectral Type				
Luminosity	A	F	G	K	M
...	0	0	3	8	49
Giants	0	1	2	3	0
Subgiants	3	6	8	2	0
Subg.-Main S.	0	6	1	0	0
Main sequence	6	30	39	73	53
Subdwarfs	0	0	1	0	4
W. dwarfs	2	0	0	0	0

[a] There are, in addition, 8 primaries classified as k-m, 22 as m, 1 as g-k, one of type DZQ6, one DC9 an one of unknown classification.



g. 4. The distribution of apparent visual magnitudes of e primaries.

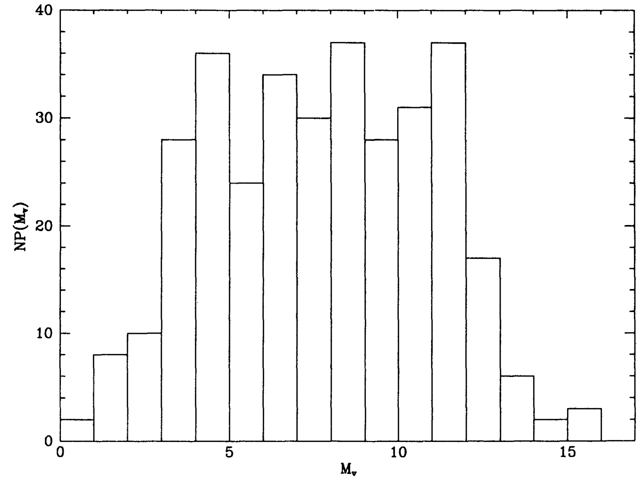
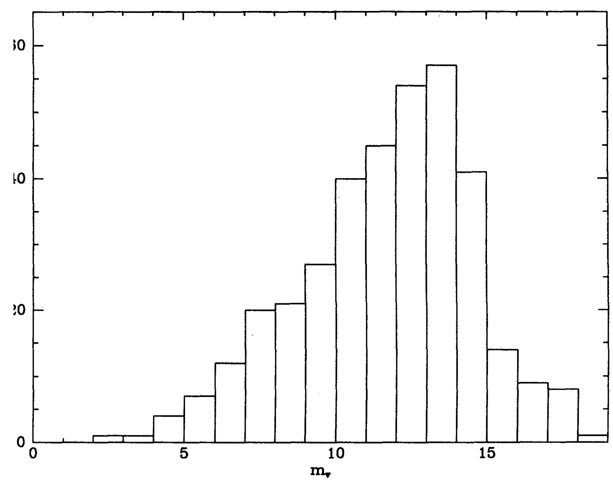


Fig. 6. The distribution of absolute visual magnitudes of the primaries.



ıg. 5. The distribution of apparent visual magnitudes of ıe secondaries.

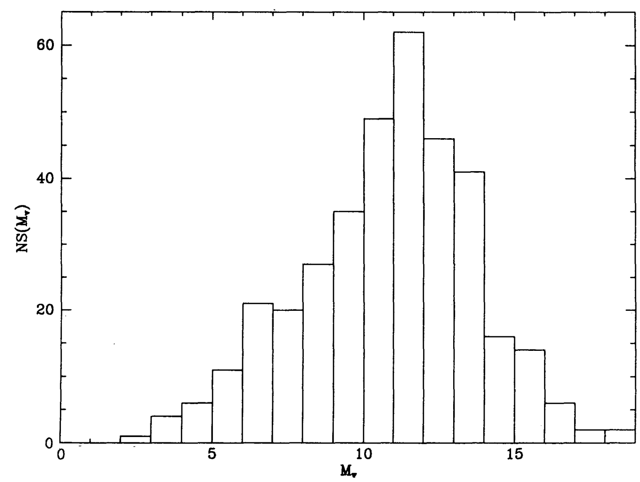


Fig. 7. The distribution of absolute visual magnitudes of the secondaries.

Table 3 contains also the absolute visual magniıde distribution for primaries and secondaries, reɔectively. Again, the primaries are broadly distriuted, with very few of them being fainter than M_v : 13, while the secondaries cluster around M_v = 2, extending all the way to M_v = 16 or so. Figures and 7 are plots of these distributions.

Table 4 contains the distribution of primaries :cording to spectral type and luminosity class. The umbers shown correspond to 301 primaries with spectral classification. For 31 primaries, only uyten's color estimates were available. Among ıese, there are 8 of type k-m, 22 of type m and of type g-k. In addition, there are 2 primaries f types DZQ6 and DC9, and one with unknown assification.

The intrinsic fraction of wide double and multiple systems with respect to field stars can be reliably estimated if we restrict ourselves to the magnitude and volume limits for which the catalogue is reasonably complete, as discussed in § 3. The results are shown in Table 5 for different values of the distance *R* and for different declination zones. The fractions listed, *f*, f' and f'' represent alternative ways of counting WBMS. *f* is the ratio of the number of WBMS to the number of primaries plus single stars. f' is the ratio of the number of WBMS to the number of field stars, as estimated by the number of entries in GJ 91. f'' is the fraction of field stars (estimated as above) that are members of WBMS. When comparing these fractions to results in the literature it should be borne in mind that they refer solely to

TABLE 5

INTRINSIC FRACTION OF WBMS TO FIELD STARS

R (pc)		Ω $\delta > -90°$	$\delta > -30°$	$\delta > 0°$
5.2	f	0.11	0.12	0.15
	f'	0.09	0.10	0.13
	f''	0.20	0.22	0.26
7.0	f	0.18	0.20	0.20
	f'	0.15	0.16	0.17
	f''	0.33	0.35	0.34
13.0	f	0.15	0.15	0.15
	f'	0.13	0.13	0.13
	f''	0.28	0.27	0.26

separations larger than 25 AU. Thus, for example, a quadruple system composed of two close doubles separated by more than 25 AU will appear in our catalogue as one WDMS, and will be counted as one system consisting of two components. A comparison of the fraction f obtained from our catalogue to that obtained from van de Kamp's (1971) list of stars closer than 5.2 pc yields similar results, $f = 0.11$ and $f = 0.14$, respectively. Note that a slightly larger volume, namely that corresponding to $R = 7.0$ pc yields a larger fraction of WBMS, $f = 0.18$. If we restrict our attention to the declination zone north of $-30°$ this fraction is even larger, $f = 0.20$. Because of the larger volume surveyed and the better degree of completeness for the northern declinations, this value for f should be the most representative of the immediate solar vicinity.

8. SUMMARY AND CONCLUSIONS

A catalogue of wide double and multiple stars in the solar vicinity is here presented. No such comprehensive catalogue has been available, although recently a few listings have been published. The present catalogue collects scattered information about such characteristics as flare activity, Hα emission and membership to moving clusters. In addition, an age classification has been carried out for each system in the catalogue. The significance of the age classification has been tested by comparing the kinematic ages of the groups by means of Wielen's relation between velocity dispersion and age. We find that indeed the PYS are younger than the POS, the former having a kinematic age of approximately 1.9×10^9 years while the latter have an age of about 4.6×10^9 years. The intrinsic fraction of WBMS is estimated to be 0.2 for the solar vicinit Apart from its intrinsic interest, the collected dat and the derived ages should make the catalogu particularly relevant for cosmogonical and dynam cal purposes.

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TABLE A1-left

CATALOGUE OF NEARBY WIDE BINARIES

Gliese	Add. id	LDS, NLTT	μ (″/y)	θ (°)	RV (km s^{-1})	Sp	V	B–V	U–B	R–I
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]	
Gl 4.1A	HR 5	+57:2865*	0.260	76.7	-11.6	G5 V	6.43	+0.64	+0.11	
Gl 4.1B			0.260	76.7	-16.0	dG8	7.20	+0.78	+0.33	
Gl 4.2A	HR 6	-49:14337A	0.592	93.9	2.6	G1 IV	5.71	+0.52	+0.03	+0.17
Gl 4.2B	LHS 1021	-49:14337B*	0.592	93.9			11.5			
NN	V 354	LDS 1503	0.294	56.		M1.5	11.12	+1.50	+1.21	+0.92
NN	V 354B	LDS 1503	0.294	56.		m	17.4			
NN	LHS 1051	LDS 8	0.628	103.8		m	10.95			+0.82
NN	LHS 1049	LDS 8	0.628	103.8		m	12.5			+1.04
GJ 1006 A	G032-006	LDS 863	1.037	137.5		M4	12.27	+1.50	+1.0	+1.25
GJ 1006 B	G032-007	LDS 863	1.037	137.5		M4.5	13.22	+1.60	+1.2	+1.26
Gl 15 A *	HD 1326	+43: 44A*	2.912	81.8	12.0	M2 V	8.08	+1.56	+1.22	+0.88
Gl 15 B	G171-048	+43: 44B*	2.912	81.8	11.3	M6 Ve	11.06	+1.79	+1.39	+1.24
GJ 1010 A	G242-051	12-361	0.800	273.0		k-m	11.30	+1.49	+1.17	+0.89
GJ 1010 B	G242-052	12-362*	0.800	273.0		m	14.0			+1.21
GJ 1021	HR 209	-48:176	0.202	65.1	-11.4	G5 IV	5.80	+0.64	+1.70	+0.22
... B							13.5			
Gl 32 A *	HD 4378	-42:249A	0.312	104.1	-26.3	K5 V	8.41	+1.17	+1.14	+0.49
Gl 32 B *		-42:249B*	0.262	114.1	-22.6	K7 V	9.06	+1.27	+1.18	+0.57
Gl 34 A *	HR 219	+57:150A*	1.213	114.9	8.2	G3 V	3.45	+0.57	+0.02	+0.22
Gl 34 B *	LHS 122	+57:150B*	1.213	114.9	10.5	K7 V	7.51	+1.39	+1.03	+0.59
Gl 40 A	HD 4967	LDS 1082	0.681	114.1	15.4	K5 V	8.96	+1.29	+1.12	+0.55
Gl 40 B	LHS 1160	LDS 1082	0.678	113.5		m	17.3			
GJ 1023 A	HD 5109		0.094	253.9		G0	9.7	+0.55	+0.07	
GJ 1023 B	BD +68 58S		0.090	250.6			10.4	+0.64	+0.16	
Gl 49 *	BD +61 195	+61:195	0.686	84.3	-5.6	K5 V	9.56	+1.50	+1.18	+0.89
Gl 51	G243-055	W 47*	0.727	82.5		M5	13.66	+1.68	+0.79	+1.51
GJ 1026 A	G033-035	LDS 873	0.644	86.2		M1.5	11.88			+1.02
GJ 1026 B	LHS 1181	LDS 873	0.644	86.2		M3.5	12.4			
Gl 53.1A	HD 6660	+22:176A	0.500	168.2	6.7	K4 V	8.41	+1.12	+1.06	+0.43
Gl 53.1B	LHS 5028	+22:176B*	0.500	168.2		M3	13.60			+1.16
NN	G002-027	NLTT	0.623	146.4		m	12.89	+1.62		+1.14
NN	G070-044	NLTT	0.623	146.4		m	13.91	+1.70		+1.24
Gl 54.2A	HR 366	LDS 3250	0.303	23.7	21.2	F5 V	5.14	+0.45	-0.06	+0.16
Gl 54.2B	HD 7438	LDS 3250	0.312	25.0	22.1	K1 V	7.85	+0.78	+0.35	+0.27
NN	HD 8326	LDS 2189	0.231	198.8		K2 V	8.3			+0.34
NN	G274-015	LDS 2189	0.242	196.		m	14.85			+1.41
NN	G070-055	LDS 3270	0.567	202.4		m	13.97	+1.76		+1.37
NN	LHS 1241	LDS 3270	0.567	202.4		m	15.0			
Gl 59 A	HD 9540	LDS 2209	0.317	119.7	-49.1	G8 V	6.97	+0.76	+0.32	+0.38
Gl 59 B	G274-060	LDS 2209	0.326	118.		m	12.77	+1.30	+1.15	
Gl 66 A *	HR 487	-56:329*	0.278	84.6	19.5	K2 V	5.80	+0.86	+0.57	+0.30
Gl 66 B *	HR 486	-56:328*	0.278	84.6	22.5	K3 V	5.90	+0.80	+0.60	+0.31
NN	G244-037	NLTT	0.280	138.	-15.	dM2	11.37			+0.98
NN	G244-036	NLTT	0.280	138.		DA6	14.5			

TABLE A1-right

CATALOGUE OF NEARBY WIDE BINARIES

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 4.1A	0465	4.77						K	Y
Gl 4.1B	0465	5.54	Gl	ab	1.432 o	30.80 o		K	
Gl 4.2A	0483	4.13					61C	m K	Y?
Gl 4.2B	0483	9.9	Gl	ab	5.4	156.48	61C	m	
NN	061	10.05							o
NN	061	16.3	GJ91	V 354 - V 354B	12.5	286.80			
NN	050	9.44							o
NN	050	11.0	GJ91	LHS 1051 - LHS 1049	48	1343.60			
GJ 1006 A	0655	11.35							o
GJ 1006 B	0655	12.30	GJ	ab	25	534.19			
Gl 15 A *	2895	10.39					H	3 M iK	Y
Gl 15 B	2895	13.37	Gl	ab	43.94 o	151.78 o	H	23 M iK	
GJ 1010 A	0637	10.32							o
GJ 1010 B	0637	13.0	GJ	ab	11	241.69			
GJ 1021	0481	4.2						K	Y
... B		11.91	GJ	ab	14.3	416.09			
Gl 32 A *	0814	7.96						K	Y
Gl 32 B *	0814	8.61	Gl	ab	5.7	98.01		K	
Gl 34 A *	1684	4.58						K	Y
Gl 34 B *	1684	8.64	Gl	ab	11.99 o	71.20 o		IK	
Gl 40 A	0692	8.16						iK	O
Gl 40 B	0692	16.5	LDS	ab	17.	343.83			
GJ 1023 A	0533	8.3							o
GJ 1023 B	0533	9.0	GJ	ab	6.5	170.68			
Gl 49 *	1126	9.82						IK	Y
Gl 51	1109	13.88	Gl	gl 49 - gl 51	284	3530.04		23	
GJ 1026 A	0585	10.72							o
GJ 1026 B	0585	11.2	GJ	ab	2	47.85			
Gl 53.1A	047	6.77						IK	Y
Gl 53.1B	047	11.96	Gl	ab	10	297.78			
NN	0646	11.94							o
NN	0646	12.96	GJ91	G 2-27 - G 70-44	63.5	1375.76			
Gl 54.2A	0568	3.91						1 4 k	Y?
Gl 54.2B	0568	6.62	Gl	ab	49.7	1224.64		k	
NN	046	6.6							o
NN	046	13.16	GJ91	HD 8326 - G 274-15	57	1734.27			
NN	0692	13.17							o
NN	0692	14.2	GJ91	G 70-55 - LHS 1241	2.5	50.56			
Gl 59 A	0704	6.21						K	Y?
Gl 59 B	0704	12.01	GJ	ab	336.0	6679.85			
Gl 66 A *	1489	6.66						K	Y
Gl 66 B *	1489	6.76	Gl	ab	7.817 o	52.50 o		K	
NN	067	10.50						K	Y
NN	067	13.6	GJ91	G 244-37 - G 244-36	10	208.89			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 81 A	HR 566	-52:394*	0.743	66.1	-6.3	G5 IV	3.70	+0.85	+0.45	+0.31
Gl 81 B		-52:394*	0.743	66.1			10.7			
GJ 1041 A *	BD +02 305	LDS 3331	0.291	90.0		k-m	10.98	+1.52	+0.98	+1.09
GJ 1041 B	LP 589-9	LDS 3331	0.291	90.0		m	14.0			
Gl 84.1A	CD -28 657	LDS 67	0.548	40.2		M0.5	10.92	+1.40	+1.15	+0.73
Gl 84.1B	G274-146	LDS 67	0.548	40.2		M3.5	12.80	+1.50	+1.12	+1.15
NN *	CD -31 909	LDS 71	0.711	68.9		M4	12.0			+1.16
NN	LHS 1376	LDS 71	0.711	68.9		M4	13.			+1.26
Gl 100 A	HD 15468	-20:465*	0.689	70.6	23.	K4 V	8.86	+1.18	+1.03	+0.48
Gl 100 C	LHS 1408	770- 27	0.668	065.7		M3	12.85	+1.61	+1.22	+1.06
Gl 105 A *	HR 753	+ 6:398A*	2.322	51.0	26.0	K3 V	5.82	+0.98	+0.80	+0.36
Gl 105 B *	G073-071	+ 6:398B*	2.322	051.4	25.7	dM4.5	11.66	+1.60	+1.11	+1.25
Gl 107 A *	HR 799	+48:746A*	0.346	104.0	24.4	F7 V	4.13	+0.49	+0.00	+0.18
Gl 107 B *		+48:746B*	0.346	104.0	25.1	M1 V	10.06	+1.48		+0.89
NN	G078-004	LDS 5393	0.422	107.		K6	10.85	+1.40	+1.27	+0.77
NN	G078-003	LDS 5393	0.435	106.7		m	15.			
Gl 113 AB	HD 17382	LDS 1138	0.304	115.7	11.1	K1 Ve	7.61	+0.83	+0.43	
Gl 113 C	LP 354-414	LDS 1138	0.296	112.		m	16.5			
Gl 119 A	G174-019	LDS 5401	0.833	123.9	76.6	M1	10.48	+1.39	+1.19	+0.78
Gl 119 B	G174-020	LDS 5401	0.833	123.9		M3	11.65	+1.42	+1.10	+1.02
NN *	LTT 1445	LDS 3448	0.435	232.		M3	10.96	+1.69		+1.16
NN *	LP 771-96	LDS 3448	0.435	232.		M3	11.8			
NN	HD 18757	+61:513A	0.993	132.8	3.8	G4 V	6.62	+0.63	+0.15	
NN	G246-022	+61:513B*	0.996	133.7		M3	12.6			
NN	LP 711-43	LDS 3450	0.262	112.		k-m	13.37			+1.17
NN	LP 711-44	LDS 3450	0.262	112.		k-m	13.50			+1.18
GJ 1054 A	CD -28 1030	LDS 86	0.376	250.		K7 V	10.24	+1.41	+1.08	+0.76
GJ 1054 B	LTT 1477	LDS 86	0.376	250.		m+	13.09	+1.64	+1.22	+1.07
...	HD 19632					G3/G5 V	7.4			
NN	CD -25 1273	-25:1273*	0.333	64.		m	9.5			+0.66
Gl 127 A	HR 963	-29:1177*	0.727	27.6	-20.0	F7 IV	3.95	+0.51	+0.05	+0.20
Gl 127 B			0.727	27.6		G7 V	6.7			
Gl 127.1A *	BD -69 177		0.08	130.		DA3	11.40	+0.05	-0.55	
Gl 127.1B	W *		0.08	130.			14.73	+0.62		
Gl 128 A	HR 962	- 1:457*	0.202	108.2	19.2	F8 V	5.06	+0.57	+0.12	+0.30
Gl 128 B			0.202	108.2			11.5			
Gl 130.1A	G174-041	R 370A	0.591	126.7	22.0	M1.5	10.92	+1.54		+0.95
Gl 130.1B	LHS 1523	R 370B*	0.591	126.7	22.1	M2	11.2			
Gl 138 *	HR 1010	LDS 92	1.483	63.7	11.5	G1 V	5.24	+0.60	+0.00	+0.23
Gl 136 *	HR 1006	LDS 92	1.495	63.2	12.2	G2 V	5.54	+0.64	+0.08	+0.23
NN	LP 355-64	LDS 3484	0.208	113.		K7	11.03	+1.43	+1.34	
NN	LP 355-65	LDS 3484	0.208	113.		a	18.			
GJ 2030 A	HR 1024	- 8:643*	0.216	180.3	42.2	G2 V	6.19	+0.71	+0.15	+0.27
GJ 2030 B			0.216	180.3			12.3			
NN	HD 21175		0.077	99.8		K0 V	6.92			
...							11.32			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 81 A	0548	2.39						k	O
Gl 81 B	0548	9.4	Gl	ab	5.0	127.70			
GJ 1041 A *	093	10.82							o
GJ 1041 B	093	13.8	GJ	ab	4	60.20			
Gl 84.1A	047	9.28							o
Gl 84.1B	047	11.16	Gl	ab	58	1727.15			
NN *	088	11.7					H	M	Y
NN	088	13.	GJ91	CD-31 909 - LHS 1376	105	1669.96	H	M	
Gl 100 A	049	7.31						k	O
Gl 100 C	049	11.30	GJ	ab-c	462	13196.11			
Gl 105 A *	1294	6.38						k	O
Gl 105 B *	1294	12.22	Gl	ab	164.8	1782.47		k	
Gl 107 A *	0793	3.63						4 A K	Y
Gl 107 B *	0793	9.56	Gl	ab	22.36 o	281.97 o		K	
NN	047	9.21					H	M	Y
NN	047	13.	GJ91	G 78-4 - G 78-3	18	536.01	H	M	
Gl 113 AB	046	5.92					h	K	Y
Gl 113 C	046	14.8	LDS	ab-c	20.	608.52			
Gl 119 A	0448	8.74						k	O
Gl 119 B	0448	9.91	Gl	ab	17	531.09			
NN *	131	11.55					S	M	Y
NN *	131	12.4	GJ91	LTT 1445 - LP 771-96	4.5	48.08	S	M	
NN	045	4.89						k	O
NN	045	10.9	GJ91	HD 18757 - G 246-22	266	8273.12			
NN	048	11.78							o
NN	048	11.91	GJ91	LP 711-43 -LP 711-44	114	3324.02			
GJ 1054 A	046	8.55							o
GJ 1054 B	046	11.40	GJ	ab	67	2038.53			
...		6.56							o
NN	068	8.7	GJ91	CD-25 1273- HD 19632	780	16054.09			
Gl 127 A	0727	3.26						k	O
Gl 127 B	0727	6.0	Gl	ab	4.367 o	60.07 o			
Gl 127.1A *	0849	11.04							o
Gl 127.1B	0849	14.37	Gl	ab	8	131.88			
Gl 128 A	0533	3.69						4 K	Y
Gl 128 B	0533	10.1	Gl	ab	3.3	86.65			
Gl 130.1A	0706	10.16					H	M K	Y
Gl 130.1B	0706	10.4	Gl	ab	4.7	93.17	H	M K	
Gl 138 *	0875	4.95						k	O
Gl 136 *	0936	5.40	Gl	gl 138 - gl 136	310	4958.54		k	
NN	045	9.3							o
NN	045	16.	GJ91	LP 355-64 -LP 355-65	278	8646.34			
GJ 2030 A	055	4.89						K	Y
GJ 2030 B	055	11.0	GJ	ab	3.9	99.24			
NN	069	6.11							o
...		10.51	GJ91	HD 21175 - anon.	2.1	42.60			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	B–V	U–B [9]	R–I
GJ 1060 B	LHS 1550	888- 63*	0.839	063.7		sdM3	13.8			+1.18
GJ 1060 A	LHS 1549	888- 64	0.839	063.7		DA5	14.0			
NN	HD 21663		0.176	108.9	24.3	G5	8.32	+0.74	+0.32	+0.25
NN	YPC 727.1 ?		0.176	108.9	27.1	dK6	10.75	+1.42	+1.23	
Gl 143.2A	HR 1083	LDS 100	0.537	45.2	12.0	F5 IV-V	4.71	+0.39	-0.04	+0.11
Gl 143.2B	LHS 1552	LDS 100	0.524	044.9		m	10.75	+1.42		+0.80
NN	G006-024	W 204	0.629	157.1		M3.5	12.70			+1.10
Wo 9120	G006-025	W 205*	0.629	157.1		M3.5	13.1			+1.13
Gl 150.1A	BD +16 502	+16:502A	0.300	160.	36.1	dM0	9.96	+1.45	+1.27	+0.70
Gl 150.1B	G006-028	+16:502B*	0.300	160.	13.3	dM0	10.81	+1.48	+1.22	+0.86
Gl 153 A	HD 23189	+68:278	0.291	27.0	4.3	K7	9.33	+1.28	+1.20	+0.54
Gl 153 B	G221-024	Grw +68:1482*	0.309	21.	3.1	M2.5 J	11.30	+1.54	+1.20	+0.90
Gl 154.1A	HD 23588	-28:1276	0.364	63.6	32.9	K5 V	8.25	+1.00	+0.80	+0.40
Gl 154.1B			0.364	63.6		M3 V	11.6			
GJ 1064 A	HD 23439	+41:750A	1.375	153.9	49.6	K1 V	8.15	+0.78	+0.20	
GJ 1064 B	LHS 181	+41:750B*	1.400	154.6	51.5	K2 V	8.75	+0.90	+0.45	
Wo 9131	HD 23585	LDS 6111	0.044	158.1	4.3	F0 V	8.38	+0.29	+0.08	
...	LDS 6111	LDS 6111				m	c 16.67			
Gl 157 A	HD 24916	- 1:565A	0.245	233.2	5.7	K4 V	8.04	+1.11	+1.03	+0.45
Gl 157 B		- 1:565B*	0.245	233.2	14.0	dM3 e	11.61	+1.47	+1.08	+1.02
Gl 165 AB	G175-020	R 29	0.457	242.8		M3.5	13.67	+1.75		+1.31
...	CHARA 15									
Gl 167.3	HR 1355		0.170	197.5	29.3	K2 IV	4.44	+1.07	+1.08	+0.37
...							12.5			
Gl 169.1A *	G175-034	Stein 2051A	2.383	144.8	17.	dM4	11.08	+1.65	+1.20	+1.14
Gl 169.1B	G175-034	Stein 2051B*	2.383	144.8		DC5	12.44	+0.31	-0.52	-0.49
Gl 170.1	HR 1427	LDS 2246	0.100	110.5	41.0	A6 IV	4.78	+0.17	+0.13	
...		LDS 2246					6.7			
Gl 171.1A	HR 1457	+16:629*	0.200	161.1	54.5	K5 III	0.85	+1.54	+1.90	+0.70
Gl 171.1B		+16:629*	0.200	161.1		dM2	13.5			
Gl 171.2A	HD 283750	LDS 1180	0.288	122.3	35.2	dK5 ep	8.42	+1.12	+0.88	+0.51
Gl 171.2B	G039-027	LDS 1180	0.278	118.		DC8	15.80	+0.65	-0.05	
Gl 173.1A	HD 286955	LDS 1184	0.364	182.8	-21.3	K3 V	9.20	+1.02	+0.82	+0.43
Gl 173.1B	G083-029	LDS 1184	0.358	179.		k-m	14.19	+1.57	+1.06	+1.10
Wo 9163 AB	BD - 9 956		0.158	226.		dM0	10.97	+1.48	+1.17	+0.82
...							10.98			
Gl 174.1A	HR 1502		0.166	242.7	0.8	F2 V	4.44	+0.34	+0.01	+0.20
Gl 174.1B			0.166	242.7			12.5			
GJ 2036 A *	U098	LDS 131	0.13	59.		M2 Ve	11.13	+1.57	+1.08	+1.10
GJ 2036 B *	U098B	LDS 131	0.13	59.			12.15	+1.60	+1.28	
NN *	BD -21 1074					M2	10.29	+1.52		+0.90
NN *	Steph 545					M3:	11.66	+1.51		+1.14
Gl 199 A	HD 34751		0.14	253.	27.6	K3/5 V	9.33	+1.27	+1.23	+0.64
Gl 199 B			0.14	253.			13.5			
Gl 200 A *	HD 34673	- 3:1061A	0.734	80.0	86.5	K3 V	7.70	+1.04	+0.86	+0.47
Gl 200 B *	LHS 1755	- 3:1061B*	0.734	80.0		M2	11.7			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
GJ 1060 B	0576	12.6							o
GJ 1060 A	0576	12.8	GJ	ab	8	194.39			
NN	0452	6.60						K	Y
NN	0452	9.03	GJ91	HD 21663 - YPC727.01	20.2	625.48		K	
Gl 143.2A	0569	3.49					H	M K	Y
Gl 143.2B	0569	9.53	Gl	ab	54.1	1330.71	H	M	
NN	054	11.36							o
Wo 9120	048	11.5	GJ91	G 6-24 - Wo 9120	63	1632.85			
Gl 150.1A	062	8.92						K	Y
Gl 150.1B	062	9.77	Gl	ab *	100	2257.40		K	
Gl 153 A	0518	7.90						K	Y
Gl 153 B	0518	9.87	Gl	a-bc	17	459.32		K	
Gl 154.1A	048	6.66					H	M K	Y
Gl 154.1B	048	10.0	Gl	ab	1.8	52.48	H	M	
GJ 1064 A	0489	6.60						k	O
GJ 1064 B	0489	7.20	GJ	ab	8.0	228.97		k	
Wo 9131	0486	6.8						1 K	Y
...		15.10	LDS	LDS 6111 ab	273	7861.88			
Gl 157 A	068	7.20					S	M IK	Y
Gl 157 B	068	10.77	Gl	ab	11.1	228.46	S	23 M K	
Gl 165 AB	0619	12.63							o
...		99.9	Gl	ab	1.261	28.51			
Gl 167.3	0670	3.57						K	Y
...		11.63	Gl	gl 167.3 - anon.	13.7	286.18			
Gl 169.1A *	1819	12.38						k	O
Gl 169.1B	1819	13.74	Gl	ab	6.8	52.32			
Gl 170.1	0523	3.37					h*	4 K	Y
...		5.29	LDS	ab	250.	6690.19			
Gl 171.1A	0494	-0.68					h*	K	Y
Gl 171.1B	0494	12.0	Gl	ab	30.4	861.28	h*		
Gl 171.2A	0611	7.35					H	23 M K	Y
Gl 171.2B	0611	14.73	Gl	ab	126	2886.22	H	M	
Gl 173.1A	0494	7.67						iK	O
Gl 173.1B	0494	12.66	Gl	ab	36	1019.94			
Wo 9163 AB	051	9.51					S	M	Y
...		9.52	GJ91	ab	2	54.89			
Gl 174.1A	0448	2.7						1 4 K	Y
Gl 174.1B	0448	10.8	Gl	ab	6.6	206.19			
GJ 2036 A *	095	11.0							o
GJ 2036 B *	095	12.0	GJ	ab	9	132.59			
NN *	083	9.89							o
NN *	083	11.26	GJ91	BD-21 1074-Steph 545	8.3	139.96			
Gl 199 A	061	8.26						iK	O
Gl 199 B	061	12.4	Gl	ab	5.0	114.72			
Gl 200 A *	0797	7.21						k	O
Gl 200 B *	0797	11.2	Gl	ab	2.7	47.41			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 202	HR 1780	+17:920	0.245	92.8	38.1	F8 Ve	4.99	+0.53	-0.06	
Gl 201	HD 35171	+17:917*	0.251	89.1	37.8	dK5 e	7.95	+1.09	+1.00	+0.44
GJ 2043 A	LP 412-213	417-213	0.199	207.		dM2	10.63	+1.47	+1.29	+0.77
GJ 2043 B	LP 417-212	417-212*	0.199	207.		m	14.68			+1.28
NN	G097-052	R 45A	0.380	197.		M3	12.32			+1.06
NN	LTT 11679	R 45B*	0.380	197.		M3.5	13.62			+1.21
Gl 211 *	HR 1925	LDS 890	0.512	178.0	1.8	K1 Ve	6.23	+0.84	+0.51	+0.29
Gl 212 *	HD 233153	LDS 890	0.495	177.7	2.0	M1	9.75	+1.48	+1.20	+0.82
Gl 224	HR 2067	LDS 5667	0.608	143.4	0.3	G5 IV	6.61	+0.65	+0.13	+0.22
...	LDS 5667	LDS 5667				g	c 17.14			
NN	G192-011	NLTT	0.253	184.		M1	10.25	+1.51	+1.25	+0.83
NN	G192-012	NLTT	0.253	184.		m	13.56			+1.31
NN	G249-028	LDS 1201	1.174	161.4		k-m	12.90	+1.56		
NN	G249-027	LDS 1201	1.174	161.4		m	13.31	+1.59		
Gl 225.2A	HD 40887	-31:2902*	0.560	314.4	101.7	K5 V	8.28	+1.14	+0.94	+0.52
Gl 225.2C			0.560	314.4	105.0	K5 V	8.3			
Gl 228 A *	BD +10 1032	+10:1032*	0.970	175.8	55.5	dM2.5 J	10.58	+1.46	+1.08	+1.03
Gl 228 B *			0.970	175.8			12.5			
Gl 231.1A	HR 2251	+5:1168	0.261	306.7	9.6	F9 V	5.70	+0.60	+0.10	+0.22
Gl 231.1B	G106-036	NLTT	0.290	302.	8.9	m+	13.42	+1.41	+1.10	+1.24
Gl 233 AB	HD 45088	+18:1214*	0.210	214.6	-8.4	K2 V e	6.76	+0.94	+0.63	
...							13.56			
NN	HR 2468		0.072	330.0	32.3	G0 V	6.34	+0.62	+0.12	
NN			0.072	330.0			8.3			
NN	G108-021	NLTT	0.287	173.		m	12.06			+1.11
NN	G108-022	NLTT *	0.287	173.		m	13.33			+1.22
NN	LHS 1864	121- 41*	0.922	173.6		M3.5 J	12.44	+1.59	+1.25	
NN	G192-039		0.922	173.6			14.9			
NN	HD 263175	+32:1398	0.462	280.1	-34.5	K3 V	8.77	+0.96	+0.70	
NN	G087-004	R 419*	0.528	280.5		M0.5	12.17	+1.53	+1.23	
Gl 250 A *	HD 50281	- 5:1844A	0.544	269.8	-9.6	K3 V	6.59	+1.05	+0.95	+0.39
Gl 250 B *	LHS 1876	- 5:1844B*	0.541	270.0	-6.9	M2	10.09	+1.50	+1.26	+0.98
Gl 257 A *	CD -44 3045	-44:3045*	1.134	265.0		M3	11.5	+1.66	+1.21	+1.12
Gl 257 B *			1.134	265.0		M3	11.7			
Wo 9231 A	HR 2763		0.062	229.7	-9.2	A3 V	3.58	+0.11	+0.10	-0.05
Wo 9231 B			0.062	229.7			10.			
Gl 271 A	HR 2777		0.029	239.1	-15.3	F1 IV-V	3.53	+0.34	+0.04	+0.10
Gl 271 B			0.029	239.1	2.2	K3 V	8.2			
Gl 275.2A	G107-069	NLTT	1.295	189.8		sdM5	13.56	+1.71	+1.22	
Gl 275.2B	G107-070	NLTT *	1.295	189.8		DC	14.63	+0.99	+0.36	
Gl 277 A *	BD +36 1638	+36:1638	0.440	231.5	0.1	dM3.5e	10.58	+1.47	+1.15	+1.07
Gl 277 B *	G087-043	R 989*	0.441	231.	0.1	dM4.5e	11.78	+1.52	+1.18	+1.22
NN	HR 2883		0.185	209.9	55.0	F9 V	5.90	+0.54	-0.08	+0.21
NN			0.185	209.9			8.6			
Gl 282 A	HD 61606	- 3:2001	0.297	165.7	-21.1	K2 Ve	7.20	+0.96	+0.73	+0.32
Gl 282 B	BD -03 2002	- 3:2002*	0.279	165.1	-13.4	K5	8.94	+1.33	+1.24	+0.57

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 202	0652	4.06						4 K	Y
Gl 201	0612	6.88	Gl	gl 202 - gl 201	720.0	15455.57		IK	
GJ 2043 A	046	8.94							o
GJ 2043 B	046	12.99	NLTT	ab	14	425.96			
NN	051	10.86							o
NN	051	12.16	GJ91	G 97-52 -LTT 11679	6	164.66			
Gl 211 *	0827	5.82					h	K	Y
Gl 212 *	0861	9.43	Gl	gl 211 - gl 212	97.5	1650.06	h	IK	
Gl 224	0474	5.0						k	O
...		15.52	LDS	ab	47.	1387.78			
NN	076	9.65							o
NN	076	12.96	GJ91	G 192-11 - G 192-12	161	2964.92			
NN	0495	11.37							o
NN	0495	11.78	GJ91	G 249-28 - G 249-27	56	1583.37			
Gl 225.2A	066	7.38						k	O
Gl 225.2C	066	7.4	Gl	ab-c	3.95 o	59.85 o		k	
Gl 228 A *	1008	10.60						k	O
Gl 228 B *	1008	12.5	Gl	ab	2.4	33.32			
Gl 231.1A	061	4.63						a k	O
Gl 231.1B	061	12.35	Gl	ab	95	2179.69		k	
Gl 233 AB	0666	5.88					s	23 K	Y
...		12.68	Gl	ab	1.3	27.32			
NN	046	4.65						K	Y
NN	046	6.6	GJ91	HR 2468 - anon.	2.1	63.89			
NN	064	11.09							o
NN	064	12.36	GJ91	G108-21 - G108-22	51	1115.30			
NN	0521	11.02							o
NN	0521	13.5	GJ91	LHS 1864 - G 192-39	1.8	48.35			
NN	0471	7.14						k	O
NN	0471	10.54	GJ91	HD 263175 - G 87-4	31	921.17			
Gl 250 A *	1089	6.78						k	O
Gl 250 B *	1089	0.28	Gl	ab	58	745.42		k	
Gl 257 A *	1169	11.8							o
Gl 257 B *	1169	12.0	Gl	ab	3.2	38.31			
Wo 9231 A	0460	1.89					H	1 4M K	Y
Wo 9231 B	0460	8.	GJ91	ab	9.6	292.09	H	M	
Gl 271 A	0624	2.51					s	4 K	Y
Gl 271 B	0624	7.2	Gl	ab	6.975 o	111.78 o	s	K	
Gl 275.2A	0865	13.25							o
Gl 275.2B	0865	14.32	Gl	ab	106	1715.10			
Gl 277 A *	0830	10.18						23 K	Y
Gl 277 B *	0830	11.38	Gl	ab	38.6	650.89		23 K	
NN	046	4.21					s	k	O
NN	046	6.9	GJ91	HR 2883 - anon.	23.4	711.96	s		
Gl 282 A	0743	6.55						K	Y
Gl 282 B	0743	8.29	Gl	ab *	58	1092.54		K	

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 283 A	LHS 235	LDS 5693	1.252	116.6	11.	DZQ6	13.00	+0.24	−0.62	+0.04
Gl 283 B	LHS 234	LDS 5693	1.252	116.6		m	16.42	+1.83		
Gl 288 A	HR 3018	−33:4113	1.700	350.2	102.6	G0 V	5.36	+0.59	−0.06	+0.23
Gl 288 B	LHS 237a	VBs 3*	1.63	348.		m	16.59	+1.20		+0.57
GJ 1102 A	LHS 240	LDS 3765	1.778	173.2		DC9	16.69	+1.10		
GJ 1102 B	LHS 239	LDS 3765	1.778	173.2		DC9	16.98	+1.30		
GJ 1103 A	G112-050	603- 1	0.766	160.6	52.	m	13.50	+1.68	+1.05	+1.43
GJ 1103 B	LHS 1952	603- 2*	0.766	160.6		m	15.0			
Gl 292 A	HR 3079	−34:4036*	0.310	319.8	26.7	F5 V	5.05	+0.44	−0.06	+0.16
Gl 292 B			0.310	319.8		K3	8.6			
Gl 293.1A	HD 65277		0.181	270.0	−4.0	K5 V	8.06	+1.04	+0.99	+0.42
Gl 293.1B	HD 65277		0.181	270.0			13.3			
NN	LDS 3768	LDS 3768	0.115	218.		m	14.24			+1.25
NN	LDS 3768	LDS 3768	0.115	218.		m	15.09			+1.39
NN	BD +21 1764	LDS 902	0.466	221.3		K5	9.80	+1.38	+1.24	
NN	LHS 5134	LDS 902	0.487	227.2		m	11.0			
GJ 1108 A	BD +33 1646		0.219	194.3	4.	dM0.5e	10.05	+1.35	+1.13	+0.67
GJ 1108 B	GSC 1983.13					dM3 e	12.12	+1.53		+1.17
Gl 297.2A	HR 3202	LDS 204	0.263	282.1	33.0	F7 V	5.54	+0.49	−0.00	+0.18
Gl 297.2B	L 818-040	LDS 204	0.249	282.	34.4	M3	11.82	+1.51		+0.99
GJ 2069 A *	G009-008	LDS 905	0.282	245.		M5 e	11.89			+1.26
GJ 2069 B	G040-026	LDS 905	0.282	245.			13.32			+1.36
NN	G113-042	LDS 221	0.432	259.		M1.5	11.21	+1.41		+0.84
NN	G113-043	LDS 221	0.432	259.		M3	12.36	+1.47		+1.03
Gl 314 A	HR 3430	−22:2345*	0.494	331.0	47.7	G3 V	5.28	+0.73	+0.35	+0.23
Gl 314 B			0.494	331.0		K0 V	6.8			
Gl 323 A	BD +08 2131		0.06	270.	−10.0	dM0 pJ	9.77	+1.36	+1.20	+0.62
Gl 323 B			0.06	270.			9.9			
Gl 324 A	HR 3522	+28:1660A	0.528	243.9	27.2	G8 V	5.95	+0.86	+0.62	+0.26
Gl 324 B	G047-009	+28:1660B*	0.538	243.7	25.2	M3.5	13.14	+1.64	+1.20	+1.30
Gl 325 A *	HD 75632	LDS 1684	1.386	255.2	44.3	K5 V	8.70	+1.39	+1.25	+0.63
Gl 325 B *	LHS 257	LDS 1684	1.407	254.1	44.3	K6 V	8.9			
Gl 326 A	LHS 2069	LDS 3829	0.622	148.2		M6 J	12.52	+1.61		+1.10
Gl 326 B	LHS 2070	LDS 3829	0.622	148.2			12.8			
GJ 1116 A	G009-038	LDS 3836	0.874	267.7	−34.	m	14.06	+1.84		+1.76
GJ 1116 B	LHS 2077	LDS 3836	0.874	267.7		m	14.92	+1.93		
GJ 1120 A	HD 77175	+15:1957A	0.343	201.5	−12.0	K5	9.43	+1.30	+1.22	+0.55
GJ 1120 B	LTT 12364	+15:1957B*	0.388	196.7	−12.7	K5	9.49			
Gl 335 A	HR 3616		0.099	188.1	−2.9	F7 IV-V	4.84	+0.49	+0.02	
Gl 335 B			0.099	188.1		K2 V	8.44			
Gl 336.2A	HD 79170	LDS 255	0.18	278.	18.1	K0 V	9.78	+0.78	+0.40	+0.40
Gl 336.2B	L 317-002	LDS 255	0.18	278.	26.5	K0 V	10.30	+0.91	+0.65	
Gl 338 A *	HD 79210	+53:1320	1.662	249.6	13.7	M0 Ve	7.62	+1.39	+1.20	+0.68
Gl 338 B *	HD 79211	+53:1321*	1.690	246.9	14.7	M0 Ve	7.71	+1.42	+1.25	+0.69
Gl 339.3	HR 3684		0.022	105.6	5.8	F5 III	4.62	+0.45	+0.10	
... B							14.5			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 283 A	1120	13.25						k	O
Gl 283 B	1120	16.67	Gl	ab	21	262.42			
Gl 288 A	0625	4.34						k	O
Gl 288 B	0625	15.57	Gl	ab	1350	30231.09			
GJ 1102 A	0586	15.53							o
GJ 1102 B	0586	15.82	GJ	ab	16	382.14			
GJ 1103 A	1138	13.78						k	O
GJ 1103 B	1138	15.3	GJ	ab	3	36.90			
Gl 292 A	0699	4.27						1 K	Y
Gl 292 B	0699	7.8	Gl	ab	3.0	60.07			
Gl 293.1A	0529	6.68					h	K	Y
Gl 293.1B	0529	11.9	Gl	ab	4.1	108.47	h		
NN	048	12.65							o
NN	048	13.50	LDS	LDS 3768 ab	16	466.53	s		
NN	059	8.7							o
NN	059	9.9	GJ91	BD+21 1764 -LHS 5134	9	213.50			
GJ 1108 A	058	8.87						2 K	Y
GJ 1108 B	058	10.94	GJ91	ab	12.3	296.81		23	
Gl 297.2A	0488	3.98					h*	K	Y
Gl 297.2B	0488	10.26	Gl	ab	92	2638.57	h*	K	
GJ 2069 A *	114	12.17						3	Y
GJ 2069 B	114	13.60	GJ	ab	13	159.60		3	
NN	049	9.66							o
NN	049	10.81	GJ91	G 113-42 - G 113-43	83	2370.73			
Gl 314 A	0633	4.29						A K	Y
Gl 314 B	0633	5.8	Gl	ab	1.8884 o	29.83 o			
Gl 323 A	054	8.43						IK	Y
Gl 323 B	054	8.6	Gl	ab	2.6	67.39			
Gl 324 A	0764	5.37					H	M K	Y
Gl 324 B	0764	12.56	Gl	ab	85	1557.13	H	M K	
Gl 325 A *	0884	8.43						ik	O
Gl 325 B *	0884	8.6	Gl	ab	5.73 o	64.82 o		k	
Gl 326 A	0687	11.70							o
Gl 326 B	0687	12.0	Gl	ab	2.4	48.89			
GJ 1116 A	1913	15.47					h	3 k	Y
GJ 1116 B	1913	16.33	GJ	ab	4.5	32.92	h	3	
GJ 1120 A	0550	8.13						iK	O
GJ 1120 B	0550	8.19	GJ	ab	5.2	132.32		K	
Gl 335 A	0540	3.5						K	Y
Gl 335 B	0540	7.1	Gl	ab	6.20 o	114.81 o			
Gl 336.2A	0452	8.06						K	Y
Gl 336.2B	0452	8.58	Gl	ab *	9.0	278.68		K	
Gl 338 A *	1625	8.67					h*	IK	Y
Gl 338 B *	1625	8.76	Gl	ab	16.52 o	101.66 o	h*	IK	
Gl 339.3	0625	3.60						4 K	Y
... B		13.48	Gl	ab	11.3	253.05			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
NN	G047-033	NLTT	0.382	210.		k-m	11.77	+1.50	+1.23	
NN	LP 313-38	313- 38*	0.382	210.		m	16.			
GJ 1122 A	G115-068	NLTT	0.250	272.		m	14.52	+1.68		+1.34
GJ 1122 B	G115-069	NLTT	0.250	272.		m	14.67	+1.68		+1.35
Gl 347 A	G161-033	R 439	0.692	193.8	8.5	M3.5	12.08	+1.53	+1.11	+1.04
Gl 347 B	G161-034	NLTT *	0.692	193.8		m	15.00	+1.87	+1.25	+1.73
Gl 348 A	HR 3759		0.134	104.2	10.8	F6 V	4.60	+0.45	+0.00	+0.26
Gl 348 B	BD -02 2902		0.146	103.1	11.5	K0	7.18	+0.87	+0.57	
Gl 354 A	HR 3775	+52:1401*	1.095	240.4	15.3	F6 IV	3.17	+0.46	+0.02	+0.16
Gl 354 B			1.095	240.4			13.8			
Gl 354.1A	HD 82443	LDS 3903	0.292	209.6	9.3	dG9	7.01	+0.77	+0.33	
Gl 354.1B	LP 314-20	LDS 3903	0.274	210.		m	16.5			
Gl 356 A *	HR 3815	+36:1979*	0.775	251.4	14.9	G8 V	5.41	+0.77	+0.44	+0.26
Gl 356 B *			0.775	251.4			13.0			
Gl 360	G235-035	LDS 911	0.727	246.4	6.9	M3	10.57	+1.50		+1.02
Gl 362 *	G235-036	LDS 911	0.727	246.4	6.0	M3	11.22	+1.52		+1.12
Gl 368.1A	HD 85228	-52:3377*	0.358	312.5	4.4	K1 V	7.93	+0.90	+0.65	+0.46
Gl 368.1B			0.358	312.5			12.0			
GJ 1130 A	CD -31 7745	LDS 290	0.204	228.9		M0 V	10.21	+1.38	+1.15	+0.68
GJ 1130 B		LDS 290	0.204	228.9			14.42	+1.70		+1.30
NN	G116-072	NLTT	0.228	199.		m	13.89			+1.22
NN	G116-073	NLTT *	0.228	199.		m	14.16			+1.24
Gl 379 A	BD +75 403	+75:403	0.349	40.0	-48.9	dK6 eJ	10.18	+1.40	+1.19	+0.59
Gl 379 B			0.349	40.0			10.3			
Gl 379.1A	HR 3992	-35:6194*	0.442	271.2	36.8	F8 V	6.15	+0.60	+0.16	+0.22
Gl 379.1B			0.442	271.2			10.9			
Gl 387 A	HR 4039	+23:2207*	0.429	255.1	37.5	F8 Vbw	5.82	+0.50	-0.05	+0.17
Gl 387 B			0.429	255.1	38.4	M1	11.4			
Gl 389 A	LHS 2253	LDS 303	0.557	141.2	24.7	M3	10.72	+1.43	+1.12	+0.80
Gl 389 B	LHS 2254	LDS 303	0.557	141.2		m	12.63	+1.49		+1.07
NN	G196-022	LDS 1241	0.627	214.4		k-m	13.52			+1.21
NN	G196-023	LDS 1241	0.627	214.4		m	13.68			+1.22
Gl 392 A	HR 4098	+49:1961A	0.886	175.0	-6.8	F9 V	6.44	+0.60	+0.05	+0.24
Gl 392 B	LHS 2267	+49:1961B*	0.886	175.0			12.5			
Gl 395 *	HR 4112	LDS 2863	0.181	258.8	8.6	F8 V	4.84	+0.52	-0.01	+0.16
Gl 394	HD 237903	LDS 2863	0.185	258.1	9.1	K7 Ve	8.69	+1.33	+1.24	+0.55
Gl 397.1A	BD +57 1274	LDS 2314	0.251	325.	-2.	dM0 e	9.65	+1.38		+0.61
Gl 397.1B	V031B	LDS 2314	0.251	325.		m	16.2			
NN	G146-043	LDS 3999	0.411	257.		m	13.13			+1.14
NN	LP 167-63	LDS 3999	0.411	257.		m+	15.5			
GJ 1136 A	CD -35 6662		0.169	291.9		K7 V	10.19	+1.46	+1.19	+0.73
GJ 1136 B	BPM 54257		0.169	291.9			11.67	+1.52	+1.11	+0.96
Gl 401 A *	BD -18 3019	LDS 4013	1.980	250.5	36.	M1	11.03	+1.44	+0.96	+0.77
Gl 401 B	LHS 290	LDS 4013	1.980	250.5		DQ9	16.5			
GJ 1141 A	V277	LDS 917	0.196	152.		dM0	11.51	+1.48		+0.85
GJ 1141 B	LTT 12955	LDS 917	0.196	152.		dM0	11.63	+1.48		+0.88

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
NN	050	10.3							o
NN	050	14.	GJ91	G 47-33 - LP 313-38	76	2127.37			
GJ 1122 A	0496	13.00							o
GJ 1122 B	0496	13.15	GJ	ab	9	253.96			
Gl 347 A	0598	10.96						k	O
Gl 347 B	0598	13.88	Gl	ab	38	889.37			
Gl 348 A	0704	3.84						1 4 K	Y
Gl 348 B	0704	6.42	Gl	ab	65.7	1306.15		K	
Gl 354 A	0691	2.37						4 k	Y
Gl 354 B	0691	13.0	Gl	ab	4.1	83.04			
Gl 354.1A	053	5.63						A K	Y
Gl 354.1B	053	15.1	LDS	ab	65.	1716.48			
Gl 356 A *	0870	5.11					H	MA K	Y
Gl 356 B *	0870	12.7	Gl	ab	3.84 o	44.14 o	H	M	
Gl 360	0741	9.92					h	K	Y
Gl 362 *	0900	10.99	Gl	gl 360 - gl 362	89	1681.02	h	K	
Gl 368.1A	045	6.20					H	M K	Y
Gl 368.1B	045	10.3	Gl	ab	1.4	43.54	H	M	
GJ 1130 A	050	8.70							o
GJ 1130 B	050	12.91	GJ	ab	8	223.93			
NN	045	12.16							o
NN	045	12.43	GJ91	G116-72 - G116-73	23	715.34			
Gl 379 A	0542	8.85						Ik	Y
Gl 379 B	0542	9.0	Gl	ab	1.625 o	29.98 o			
Gl 379.1A	0467	4.50					zHer	k	O
Gl 379.1B	0467	9.2	Gl	ab	2.0	59.94	zHer		
Gl 387 A	0608	4.74					H	MA K	Y
Gl 387 B	0608	10.3	Gl	ab	7.4	170.34	H	M K	
Gl 389 A	0550	9.42						k	O
Gl 389 B	0550	11.33	Gl	ab	12	305.36			
NN	051	12.06							o
NN	051	12.22	GJ91	G 196-22 - G 196-23	16	439.09			
Gl 392 A	0519	5.02					Arc	ma k	O
Gl 392 B	0519	11.1	Gl	ab	4.7	126.74			
Gl 395 *	0780	4.30						2 K	Y
Gl 394	0721	7.98	Gl	gl 395 - gl 394	120	2153.21		IK	
Gl 397.1A	057	8.43						k	O
Gl 397.1B	057	15.0	LDS	ab	142.	3486.69			
NN	049	11.58					H	M	Y
NN	049	14.0	GJ91	G 146-43 - LP 167-63	46.5	1328.18	H	M	
GJ 1136 A	056	8.93							o
GJ 1136 B	056	10.41	GJ	ab	17	424.87			
Gl 401 A *	0773	10.47						k	O
Gl 401 B	0773	15.9	NLTT	ab	7.5	135.79			
GJ 1141 A	0684	10.69					s		o
GJ 1141 B	0684	10.81	GJ	ab	19	388.77	s		

TABLE A1-left (CONTINUED)

Gliese	Add. id	LDS, NLTT	μ (″/y)	θ (°)	RV (km s^{-1})	Sp	V	B–V	U–B	R–I
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]	
Gl 412 A *	BD +44 2051	+44:2051A	4.528	282.1	68.8	M2 Ve	8.74	+1.54	+1.18	+0.81
Gl 412 B	G176-012	+44:2051B*	4.531	281.9		M6 e	14.40	+2.09		+1.80
GJ 1142 A	G163-051	LDS 852	0.422	184.		dM6	12.56	+1.52	+1.25	+1.08
GJ 1142 B	G163-050	LDS 852	0.422	184.	15.4	DA3	12.92	+0.05	-0.69	-0.12
Gl 414 A	HD 97101	+31:2240A	0.614	109.8	-15.4	K8 V	8.33	+1.34	+1.29	+0.59
Gl 414 B	BD +31 2238	+31:2240B*	0.618	110.2	-15.0	M2 V	9.98	+1.52	+1.15	+0.92
Gl 420 A *	HD 97584	+74:456A	0.417	284.9	8.1	dK5	7.68	+1.06	+0.92	+0.40
Gl 420 B *	ADC 8100C	+74:456C*	0.417	284.9	8.6	M2	11.4			
GJ 1143 A	HD 97782	-22:3102*	0.450	215.3		K4 V	8.98	+1.14	+1.02	+0.51
GJ 1143 B	DON 466B		0.450	215.3			13.5			
Gl 423 A *	HR 4375	+32:2132A*	0.727	216.2	-15.9	G0 Ve	4.33	+0.59	+0.04	+0.22
Gl 423 B *	HR 4374	+32:2132B*	0.727	216.2	-13.6	G0 Ve	4.8			
Gl 425 A	HD 98712	LDS 348	0.233	126.6	7.4	K4/5 V J	8.74	+1.36	+1.20	+0.58
Gl 425 B		LDS 348	0.233	126.6		m	11.0			
Gl 428 A *	HD 99279	-60:3532*	0.490	277.1	4.7	K7 V	7.50	+1.26	+1.18	+0.54
Gl 428 B *			0.490	277.1	4.5	M0 Ve	8.3			
Gl 429 A	HR 4414	LDS 921	0.747	283.6	3.8	K0 IV	6.50	+0.80	+0.48	+0.24
Gl 429 B	HD 99492	LDS 921	0.745	284.7	1.7	K2 IV-V	7.58	+1.00	+0.92	+0.34
Gl 432 A *	HR 4458	-32:8179	1.061	320.8	-22.6	K0 V	5.98	+0.81	+0.39	+0.29
Gl 432 B	LHS 309	VBs 4*	1.061	320.8		m	15.			
NN	HR 4488		0.135	36.4	-23.8	F7 V	5.48	+0.52		
...							10.8			
Gl 442 A *	HR 4523	-39:7301	1.587	284.4	15.3	G5 V	4.90	+0.66	+0.10	+0.22
Gl 442 B	LHS 313	VBs 5*	1.592	284.4			15.			
NN	G010-049	LDS 5207	0.303	253.		m	13.25			+1.23
NN	LP 613-50	LDS 5207	0.303	253.		m	17.6			
NN	HD 103112	LDS 4152	0.356	286.1	10.7	K0	7.54	+1.06	+0.90	+0.36
NN	LP 493-64	LDS 4152	0.340	289.		m	15.			
Gl 452 A *	LHS 2470	LDS 4154	0.538	198.3	26.7	M3	11.87	+1.54		+1.04
Gl 452 B	LHS 2470a	LDS 4154	0.538	198.3		f	19.4			
NN	LHS 5205	LDS 4166	0.487	268.8		M3	12.74	+1.55		+1.17
NN	LHS 5204	LDS 4166	0.487	268.8		m	15.			
Gl 456.1A	HD 105671	LDS 385	0.382	255.9	-4.2	K5 V	8.45	+1.14	+1.07	+0.54
Gl 456.1B	L 326-041	LDS 385	0.39	258.		m	13.25	+1.56		+1.48
NN	LTT 4562	LDS 390	0.255	231.		M2:	11.68	+1.59		+1.08
NN	LP 794-31	LDS 390	0.255	231.		m	12.62	+1.68		+1.16
Gl 458 A	HD 238090	LDS 5213	0.244	70.3	-17.6	dM1.5	9.79	+1.43	+1.16	+0.73
Gl 458 B	G197-050	LDS 5213	0.244	70.3		m	13.33	+1.61		+1.20
Gl 458.1AB	HD 106116	- 2:3481*	0.725	303.7	14.3	G4 V	7.43	+0.71	+0.25	+0.22
...							12			
GJ 1155 A	G013-026	LDS 935	0.706	292.5	5.	sdM3	13.28	+1.62		+1.14
GJ 1155 B	LHS 2542	LDS 935	0.706	292.5		DA s	15.32	+0.38		
Gl 461 AB	BD +01 2684		0.09	103.	4.1	M0 V	10.10	+1.47	+1.24	+0.81
...							12.5			
NN *	LTT 4730	LDS 4217	0.281	273.		M2	10.96	+1.51		+0.99
NN *	LP 735-11	LDS 4217	0.281	273.		g	11.			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 412 A *	1888	10.12						ik	O?
Gl 412 B	1888	15.78	Gl	ab	28	207.57		23	
GJ 1142 A	050	11.05							Y
GJ 1142 B	050	11.41	GJ	ab	279	7809.70		K	
Gl 414 A	0732	7.65						ik	O
Gl 414 B	0732	9.30	Gl	ab	34.8	665.38		ik	
Gl 420 A *	0816	7.24						K	Y
Gl 420 B *	0816	11.0	Gl	ac	7.0	120.06		K	
GJ 1143 A	051	7.52							o
GJ 1143 B	051	12.0	GJ	ab	2.8	76.84			
Gl 423 A *	096	4.24						2 A K	Y
Gl 423 B *	096	4.7	Gl	Aa-Bb	2.530 o	26.35 o		K	
Gl 425 A	0635	7.75						3 IK	Y
Gl 425 B	0635	10.0	Gl	ab	5.1	112.41		3	
Gl 428 A *	0909	7.29						K	Y
Gl 428 B *	0909	8.1	Gl	ab	5.760 o	63.37 o		K	
Gl 429 A	0604	5.41						k	O
Gl 429 B	0604	6.49	Gl	ab	28.7	665.04		k	
Gl 432 A *	1017	6.02						k	O
Gl 432 B	1017	15.	Gl	ab	16.2	222.94			
NN	051	4.02						k	O
...		9.34	GJ91	HR 4488 - anon.	1.4	38.42			
Gl 442 A *	0971	4.84					61C	m k	O
Gl 442 B	0971	15.	Gl	ab	25.4	366.11	61C	m	
NN	064	12.28							o
NN	064	16.6	GJ91	G 10-49 - LP 613-50	24	524.85			
NN	063	6.54						K	Y
NN	063	14.	GJ91	HD 103112 -LP 493-64	232	5154.04			
Gl 452 A *	0822	11.44						k	O
Gl 452 B	0822	19.0	GJ	ab	9	153.24			
NN	058	11.6					H	M	Y
NN	058	14.	GJ91	LHS 5205 - LHS 5204	7.5	180.98	H	M	
Gl 456.1A	052	7.03						K	Y
Gl 456.1B	052	11.83	Gl	ab	65	1749.48			
NN	074	11.03							o
NN	074	11.97	GJ91	LTT 4562 - LP 794-31	85	1607.63			
Gl 458 A	0751	9.17					s	iK	Y?
Gl 458 B	0751	12.71	Gl	ac	15	279.54	s		
Gl 458.1AB	0465	5.77						k	O
...		10.34	GJ91	ab - anon.	2	60.20			
GJ 1155 A	0460	11.59						k	O
GJ 1155 B	0460	13.63	GJ	ab	2	60.85			
Gl 461 AB	063	9.10						K	Y
...		11.50	GJ91	ab	1.3	28.88			
NN *	083	10.56							o
NN *	083	11.	GJ91	LTT 4730 - LP 735-11	4	67.45			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
GJ 1159 A	G199-017	LDS 3046	1.232	275.1		m	14.21	+1.55		
GJ 1159 B	LHS 330	LDS 3046	1.232	275.1	-89.	M5.5-6	18.0			
NN	G013-044A	LDS 5216	0.605	239.2		M3.5	13.0			+1.20
NN	G013-044B	LDS 5216	0.605	239.2		M3.5:	14.25			+1.32
Gl 469.2A	HR 4758	-12:3647*	0.253	260.7	1.9	G0 V J	6.46	+0.58	+0.05	+0.34
Gl 469.2B			0.253	260.7			9.2			
Gl 471	BD +09 2636	+ 9:2636*	0.829	230.0	19.0	dM1	9.70	+1.45	+1.23	+0.72
Gl 469 *	G012-038	W 414	0.700	245.7		M3.5	12.06	+1.60	+1.28	+1.20
GJ 1161 A	HD 109524	-34:8280	0.228	250.5		K4 V	7.91	+1.04	+0.83	+0.40
GJ 1161 B	LTT 4788	L543-64*	0.228	251.			11.91	+1.60	+1.28	+1.01
Gl 482 A *	HR 4825	- 0:2601*	0.568	270.8	-19.9	F0 V	3.46	+0.36	-0.03	+0.11
Gl 482 B *	HR 4826	- 0:2601B*	0.568	270.7	-19.6	F0 V	3.52			+0.09
GJ 1164 A	HD 111261	-24:10541A	0.350	299.1		K4/5 V	9.02	+1.12	+0.98	+0.47
GJ 1164 B	LTT 4899	-24:10541B*	0.368	295.2		K7	10.04	+1.38	+1.12	+0.61
Gl 504	HR 5011	+10:2531	0.388	299.8	-27.4	G0 V	5.20	+0.58	+0.10	+0.20
...							14.3			
Gl 505 A *	HD 115404	+17:2611A	0.658	113.3	6.7	K1 V	6.59	+0.94	+0.62	+0.35
Gl 505 B *	LHS 2714	+17:2611B*	0.658	113.3	9.0	M1 V	9.6			
Gl 507 A *	BD +35 2436	+35:2436A	0.873	154.6	-4.9	dM1.5	9.51	+1.47	+1.20	+0.81
Gl 507 B *	G164-065	+35:2436B*	0.873	154.6	-8.5	M3	12.10	+1.58	+1.2	+1.08
NN	HD 116442	+ 3:2765	0.185	1.4	28.	G5 V	7.06	+0.77	+0.38	
NN	HD 116443	+ 3:2766*	0.190	359.5		G5 V	7.36	+0.83	+0.51	
Gl 509 A	HD 116495	+29:2405*	0.539	295.7	-39.0	dM0	9.52	+1.33	+1.21	+0.60
Gl 509 B			0.539	295.7		dK6	9.8			
Gl 512 A *	G014-055A	LDS 5781	0.482	158.9	-41.6	dM4	11.32	+1.52	+1.23	+1.11
Gl 512 B	G014-055B	LDS 5781	0.482	158.9		M4	13.69	+1.68		+1.32
Gl 515	BD -07 3632	LDS 448	1.188	247.7	37.	DA5	12.31	+0.08	-0.61	
Gl 514.1	G014-057	LDS 448	1.202	246.2		M4 :	14.25	+1.65	+1.23	+1.35
Gl 516 A	G063-036	LDS 4374	0.338	127.	-1.9	dM3.5e	12.01	+1.53	+1.25	+1.00
Gl 516 B	LP 438-8	LDS 4374	0.338	127.	-1.5	dM3.5e	12.3			
Gl 518.2A	HD 118576		0.166	282.2	3.6	G8 V	9.30	+0.64	+0.10	
Gl 518.2B			0.171	281.1	3.8		10.51	+0.83	+0.56	
Gl 527 A	HR 5185	+18:2782*	0.483	274.4	-16.1	F7 V	4.50	+0.48	+0.04	+0.15
Gl 527 B			0.483	274.4		M2	11.0			
GJ 1179 A	LHS 362	LDS 4410	1.484	275.6		dM4 :	15.32	+1.96		+1.58
GJ 1179 B	LHS 361	LDS 4410	1.484	275.6		DC9	15.65	+1.10	+0.47	+0.42
Gl 528 A *	HD 120476	+27:2296	0.461	258.5	-20.7	K4 V	7.61	+1.12	+1.04	+0.42
Gl 528 B *			0.461	258.5	-20.9	dK6	8.03			
NN	LTT 5375	LDS 461	0.373	183.		M2.5	12.72	+1.56		+1.12
...	L 691-21	LDS 461					13.61			+1.19
Gl 531	HD 120780	-50:8092	0.595	265.4	-25.0	K1 V	7.38	+0.90	+0.56	+0.35
...							13.0			
Gl 534.1A *	HR 5236	LDS 463	0.229	188.8	4.6	G8 V	6.00	+0.78	+0.25	+0.30
Gl 534.1B	L 259-140	LDS 463	0.23	190.			13.8			
Gl 537 A *	BD +47 2112	LDS 1403	0.585	094.5	-41.1	dM3 e	9.85	+1.48	+1.1	+0.83
Gl 537 B *	LHS 2850	LDS 1403	0.585	094.5	-28.0	dM3 e	9.95			

TABLE A1-right (CONTINUED)

Gliese	π (0.0001″)	M_V	SM	PD	a, Sep (″)		a, E(a) (AU)		Memb.	Age ind.	ASA
[10]	[11]	[12]	[13]	[14]	[15]		[16]		[17]	[18]	[19]
GJ 1159 A	0459	12.52									O
GJ 1159 B	0459	16.3	GJ	ab	21		640.33			k	
NN	060	11.9									o
NN	060	13.14	GJ91	G 13-44A - G 13-44B	8		186.61				
Gl 469.2A	0474	4.84								K	Y
Gl 469.2B	0474	7.6	Gl	ab	1.510	o	31.86	o			
Gl 471	0668	8.82								ik	O
Gl 469 *	0780	11.52	Gl	gl 471 - gl 469	2490		52170.25				
GJ 1161 A	062	6.87									o
GJ 1161 B	062	10.87	GJ	ab	98		2212.25				
Gl 482 A *	0987	3.43								1 4 K	Y
Gl 482 B *	0987	3.49	Gl	ab	3.746	o	37.95	o		1 4 K	
GJ 1164 A	048	7.43									o
GJ 1164 B	048	8.45	GJ	ab	12.5		364.48				
Gl 504	0742	4.55								2 4 A K	Y
...		13.65	Gl	ab	34.3		646.98				
Gl 505 A *	0840	6.21								K	Y
Gl 505 B *	0840	9.2	Gl	ab	6.4		106.64			K	
Gl 507 A *	0799	9.02								ik	Y?
Gl 507 B *	0799	11.61	Gl	ab	17.5		306.54			2 k	
NN	049	5.51								K	Y
NN	049	5.81	GJ91	HD 116442 -HD 116443	27		771.20				
Gl 509 A	0532	8.15							h	aiK	O
Gl 509 B	0532	8.4	Gl	ab	2.14	o	40.23	o	h		
Gl 512 A *	0838	10.94								K	Y?
Gl 512 B	0838	13.31	Gl	ab	10		167.02				
Gl 515	0616	11.26								k	O
Gl 514.1	0674	13.39	Gl	gl 515 - gl 514.1	498		11314.85				
Gl 516 A	0630	11.01								23 K	Y
Gl 516 B	0630	11.3	Gl	ab	3.17	o	50.32	o		23 K	
Gl 518.2A	0473	7.7								K	Y
Gl 518.2B	0473	8.9	Gl	ab	20.0		591.79			K	
Gl 527 A	074	3.85								4 K	Y
Gl 527 B	074	10.3	Gl	ab	5.4		102.13				
GJ 1179 A	0834	14.93									o
GJ 1179 B	0834	15.26	GJ	ab	188		3154.95				
Gl 528 A *	0851	7.26								IK	Y
Gl 528 B *	0851	7.68	Gl	ab	2.433	o	28.59	o		IK	
NN	048	11.13									o
...		12.02	LDS	LTT 5375 - L 691-21	380		11080.07				
Gl 531	060	6.27							H	M K	Y
...		11.89	Gl	ab	6.0		139.96				
Gl 534.1A *	087	5.70								K	Y
Gl 534.1B	087	13.5	Gl	ab	33		530.88				
Gl 537 A *	0891	9.60								IK	Y
Gl 537 B *	0891	9.70	Gl	ab *	3.8		59.69			K	

TABLE AI-left (CONTINUED)

Gliese	Add. id	LDS, NLTT	μ (″/y)	θ (°)	RV (km s^{-1})	Sp	V	B–V	U–B	R–I
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]	
Gl 539.2	CD -3011195	LDS 5808	0.523	244.2	-12.	M0	11.81	+1.50		+0.79
...		LDS 5808				m+	13.01			
Gl 544 A	HD 125455	LDS 5815	0.643	258.5	-9.1	K1 V	7.58	+0.84	+0.52	+0.30
Gl 544 B	LHS 2895	LDS 5815	0.643	258.5		M4	15.1			+1.30
Gl 548 A	BD +24 2733	LDS 960	1.376	145.0	8.6	dM1	9.75	+1.44	+1.26	+0.73
Gl 548 B	G166-028	LDS 960	1.373	144.7	7.7	dM2	10.00	+1.46	+1.26	+0.79
Gl 549 A *	HR 5404	+52:1804A*	0.468	211.2	-11.4	F7 V	4.06	+0.50	+0.01	+0.16
Gl 549 B *	G200-037	+52:1804B*	0.471	210.8	-11.3	M3	11.50	+1.50		+1.02
GJ 1183 A	G124-043	NLTT	0.412	283.		m	13.95	+1.65	+1.32	+1.36
GJ 1183 B	G124-044	NLTT *	0.412	283.		m	14.03	+1.68	+1.24	+1.37
Gl 550.2A	HR 5409		0.142	267.9	-10.1	G2 IV	4.83	+0.72	+0.21	+0.36
Gl 550.2B			0.142	267.9	-8.0	G4 V	9.0			
Gl 559 A *	HR 5459	LDS 494	3.689	281.1	-26.2	G2 V	0.01	+0.64	+0.23	+0.22
Gl 551	LHS 49	LDS 494	3.809	281.7	-16.	dM5 e	11.05	+1.83	+1.43	+1.66
Gl 560 A	HR 5463	-64:867A*	0.300	218.1	7.2	F0 Vp	3.19	+0.24	+0.11	+0.02
Gl 560 B		-64:867B*	0.300	218.1	7.0	K5 V	8.47	+1.15	+1.24	+0.42
Wo 9490 A	BD +20 3010	LDS 968	0.324	235.1	-28.7	K5	9.74	+1.29	+1.27	+0.59
Wo 9490 C	BD +20 3009	LDS 968	0.298	234.	-28.	K5	10.08	+1.34	+1.28	+0.58
Gl 563.2A	CD -2510553	LDS 508	1.217	260.7	22.	M3	11.66	+1.49	+1.05	+0.87
Gl 563.2B	LHS 379	LDS 508	1.217	260.7	44.	M3	12.06	+1.52	+1.05	+0.93
Gl 564.1	HR 5531		0.129	236.6	-46.7	A3 IV	2.75	+0.15	+0.09	-0.03
Gl 563.4	HR 5530		0.123	235.2	-23.5	F5 IV-V	5.15	+0.41	-0.03	+0.11
Gl 566 A *	HR 5544		0.171	127.2	2.2	G8 Ve	4.70	+0.73	+0.22	+0.28
Gl 566 B *			0.171	127.2	3.1	K4 Ve	6.97	+1.16	+1.15	+0.44
Gl 569 AB*	BD +16 2708	NLTT	0.335	108.4	-8.4	dM0 e	10.20	+1.48	+1.15	+0.96
...										
NN	LHS 3001	LDS 4516	0.993	299.5	8.	M5	15.50			
NN	LHS 3002	LDS 4516	0.993	299.5	9.	M7 :	18.60			
Gl 570 A *	HR 5568	LDS 514	2.025	149.1	29.1	K5 Ve	5.75	+1.10	+1.06	+0.40
Gl 570 B *	HD 131976	LDS 514	1.933	149.7	27.9	M2 V	8.00	+1.50	+1.22	+0.89
Gl 575 A *	HR 5618	+48:2259A	0.396	273.8	-29.7	F9 V n	5.19	+0.65	+0.11	
Gl 575 B *		+48:2259B*	0.396	273.8	3.4	dG2	5.96			
NN	HR 5659	LDS 973	0.656	296.0	-37.8	G5 V	6.68	+0.68	+0.25	+0.33
NN	G136-078	LDS 973	0.666	294.9	-38.2	G7 V	7.53	+0.73	+0.33	+0.35
Gl 589 A	G137-026	LDS 977	1.219	263.0	-43.2	M4.5:	12.41	+1.58	+1.18	+1.04
Gl 589 B	G137-025	LDS 977	1.219	263.0		M6	14.99	+1.81	+1.79	+1.40
Gl 593 A	HD 139341	LDS 978	0.465	277.3	-67.7	K2 V	7.43	+0.91	+0.69	+0.28
Gl 591	HD 139323	LDS 978	0.458	276.9	-65.6	K3 V	7.60	+0.96	+0.76	+0.29
GJ 1194 A	G179-043	VBs 24A	1.225	106.3	-108.	m	12.48	+1.57		+1.11
GJ 1194 B	LHS 403	VBs 24B*	1.225	106.3		m	13.8			
Gl 599 A	HR 5864	LDS 5845	0.468	241.9	-5.2	G6 V	6.01	+0.72	+0.31	+0.25
Gl 599 B	LHS 5299b	LDS 5845	0.468	241.9	1.	DA7	12.78	+0.33	-0.42	
Gl 601 A *	HR 5897	LDS 542	0.440	205.0	0.4	F2 IV	2.84	+0.29	+0.04	+0.07
...	L 153-157	LDS 542					13.22	+0.83	+0.15	
NN	G180-008	R 806	0.569	151.7		M3	11.75	+1.51	+1.21	+1.07
NN	G180-009	274- 21*	0.569	151.7		m	13.18	+1.53		+1.20

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 539.2	0445	10.05						K	Y
...		11.25	LDS	ab	33.	1037.90			
Gl 544 A	0526	6.18						k	O
Gl 544 B	0526	13.7	Gl	ab	15.3	407.10			
Gl 548 A	0637	8.77						ik	O?
Gl 548 B	0637	9.02	Gl	ab	46	1010.69		Ik	
Gl 549 A *	081	3.60					W630	4MA K	Y
Gl 549 B *	081	11.04	Gl	ab	69.2	1195.70	W630	M K	
GJ 1183 A	0618	12.90							o
GJ 1183 B	0618	12.98	GJ	ab	12	271.76			
Gl 550.2A	0446	3.08						K	Y
Gl 550.2B	0446	7.2	Gl	ab	4.8	150.63		K	
Gl 559 A *	7490	4.38						K	Y
Gl 551	7718	15.49	Gl	gl 559 - gl 551 *	7860	14687.26		23 K	
Gl 560 A	0542	1.86						1 K	Y
Gl 560 B	0542	7.14	Gl	ab	15.7	405.42		K	
Wo 9490 A	0534	8.38						IK	Y
Wo 9490 C	0534	8.72	GJ91	ab-c	135	3538.28		IK	
Gl 563.2A	048	10.07						k	O
Gl 563.2B	048	10.47	Gl	ab *	27	787.27		k	
Gl 564.1	0536	1.40						4 K	Y
Gl 563.4	0486	3.58	Gl	gl 564.1 - gl 563.4	231	6031.80		4 K	
Gl 566 A *	1491	5.57					s*	A K	Y
Gl 566 B *	1491	7.84	Gl	ab	4.884 o	32.76 o	s*	K	
Gl 569 AB*	0956	10.10						23 K	Y
...		99.9	GJ91	ab	5.1	74.66			
NN	060	14.4						k	O
NN	060	17.5	GJ91	LHS 3001 - LHS 3002	9	209.94		k	
Gl 570 A *	1742	6.96						Ik	Y
Gl 570 B *	1742	9.21	Gl	ab	22.0	176.76		ik	
Gl 575 A *	0851	4.84						K	Y
Gl 575 B *	0851	5.61	Gl	ab	3.772 o	44.32 o		K	
NN	050	5.17					eInd	m k	O
NN	050	6.02	GJ91	HR 5659 - G 136-78	24	671.80	eInd	m k	
Gl 589 A	0702	11.64						k	O
Gl 589 B	0702	14.22	Gl	ab	17.6	350.89			
Gl 593 A	0470	5.79						k	O
Gl 591	0470	5.96	Gl	gl 593 - gl 591	122	3632.97		k	
GJ 1194 A	0733	11.81						K	Y
GJ 1194 B	0733	13.1	GJ	ab	5	95.47			
Gl 599 A	0735	5.34					H	M K	Y
Gl 599 B	0735	12.11	Gl	ab	14.9	283.73	H	M K	
Gl 601 A *	0821	2.41						4 K	Y
...		12.79	GJ	L 153-157	157	2676.43			
NN	0487	10.19							o
NN	0487	11.62	GJ91	G 180-8 - G 180-9	26	747.21			

TABLE A1-left (CONTINUED)

Gliese	Add. id	LDS, NLTT	μ (″/y)	θ (°)	RV (km s^{-1})	Sp	V	$B-V$	$U-B$	$R-I$
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]		[9]	
NN	LP 329-20	LDS 4626	0.189	316.		m	13.37			+1.11
NN	LP 329-19	LDS 4626	0.189	316.		m	15.17			+1.39
Gl 611 A *	HD 144579	+39:2947	0.579	275.0	-60.0	G8 V	6.66	+0.73	+0.21	
Gl 611 B	G180-027	NLTT	0.624	274.5		m	14.23	+1.72		+1.25
Gl 615.1A	HD 145958	+13:3091A	0.456	156.7	18.1	G8 V	7.36	+0.76	+0.39	
Gl 615.1B		+13:3091B*	0.456	156.7	20.8	G8 V	7.5			
Gl 617 A *	HD 147379	LDS 2372	0.510	280.3	-19.9	M0 Ve	8.60	+1.41	+1.26	+0.68
Gl 617 B *	G225-058	LDS 2372	0.522	278.6	-19.5	M2.5	10.72	+1.49	+1.13	+1.08
Gl 618 A *	CD -3710765	LDS 555	1.222	324.5	20.	M3	10.60	+1.57	+1.21	+1.08
Gl 618 B	LHS 416	LDS 555	1.222	324.5		M5 :	14.15	+1.79		+1.59
Gl 620.1A *	HR 6094		0.074	91.1	17.0	G3/5 V	5.39	+0.63	+0.14	+0.22
Gl 620.1B *	CD -3810980		0.08	90.	52.0	DA2	11.00	-0.14	-0.96	
Gl 621	HD 147776	-13:4418	0.316	227.6	9.0	K3 V	8.40	+0.96	+0.72	+0.34
...							11.7			
Gl 624.1A	HR 6132		0.080	338.0	-13.7	G8 III	2.74	+0.91	+0.70	
Gl 624.1B	BD +61 1591		0.080	338.0		K2	8.8			
Gl 627 A	HD 148653	+18:3182A	0.514	318.0	-36.2	K3 V	7.68	+0.85	+0.45	+0.32
Gl 627 B	LHS 3204	+18:3182B*	0.514	318.0		K3 V	7.85			
Gl 629.2A	HD 149414	- 3:3968A	0.704	193.3	-171.6	G5 Ve	9.62	+0.74	+0.11	+0.32
...		- 3:3968B*					15.0			
Gl 630.1A	G225-067	LDS 1436	1.620	316.0	-118.6	dM4 e	12.90	+1.60	+1.05	+1.32
Gl 630.1B	G225-068	LDS 1436	1.620	316.0		DQ8	15.00	+0.49	-0.36	
Gl 646 A	HD 153026	-39:10940A	0.331	55.6	42.5	K5 V	8.50	+1.16	+1.08	+0.64
Gl 646 B		-39:10940B*	0.331	55.6			10.4			
Gl 653 *	HD 154363	LDS 585	1.471	218.5	34.2	K5 V	7.73	+1.16	+1.06	+0.49
Gl 654 *	BD -04 4226	LDS 585	1.461	219.2	34.6	M3.5V	10.08	+1.44	+1.07	+0.91
Gl 659 A	HD 155674		0.137	147.8	4.2	dK8	8.85	+1.16	+1.08	+0.44
Gl 659 B	BD +54 1862		0.140	141.1	2.9	dK8	9.34	+1.25	+1.21	+0.50
NN	LTT 6883	LDS 593	0.298	180.		M3	12.83	+1.49		+1.15
NN	LTT 6882	LDS 593	0.298	180.		M3	12.91	+1.49		+1.12
Gl 666 A *	HR 6416	-46:11370A	1.053	80.5	23.	G8 V	5.53	+0.77	+0.35	+0.28
Gl 666 B *	LHS 445	-46:11370B*	1.053	80.5	25.1	M0 V	8.69	+1.41	+0.89	+0.81
Gl 667 A *	HR 6426	LDS 592	1.167	99.2	0.0	K3 V	6.29	+1.04	+0.82	+0.42
Gl 667 C *	LHS 443	LDS 592	1.180	098.3	0.6	M2.5	10.24	+1.57	+1.16	+0.96
Gl 669 A *	G170-035	LDS 993	0.430	330.	-33.7	dM4 e	11.42	+1.55	+1.15	+1.18
Gl 669 B *	G170-034	LDS 993	0.430	330.	-34.0	dM5 e	12.97	+1.64	+0.73	+1.39
Gl 670 A	HR 6445	-20:4731*	0.313	132.0	-8.8	F2 V	4.41	+0.39	-0.05	+0.24
Gl 670 B			0.313	132.0		K3	8.9			
Gl 676 A *	CP -5110396	LDS 599	0.30	238.	-27.2	M0	9.58	+1.46	+1.31	+0.94
Gl 676 B *		LDS 599	0.29	240.		m	13.31	+1.51		
Gl 683.2A	HD 159704		0.115	185.3	2.8	G8 V	6.80	+0.77	+0.31	+0.38
Gl 683.2B			0.115	185.3			9.1			
Gl 684 A	HR 6573	LDS 2736	0.568	154.1	-16.3	G0 Va	5.34	+0.56	+0.07	+0.24
Gl 685	G226-066	LDS 2736	0.573	153.3	-16.3	M1 Ve	9.97	+1.47	+1.18	+0.79
NN	LTT 15241	LDS 999	0.195	179.		M1	11.12	+1.45		+0.77
NN	LTT 15242	LDS 999	0.195	179.		M5	12.72	+1.53		+1.12

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
NN	045	11.64							o
NN	045	13.44	GJ91	LP 329-20 -LP 329-19	112	3483.42			
Gl 611 A *	0801	6.18						a k	O
Gl 611 B	0725	13.53	GJ	ab	70	1223.11			
Gl 615.1A	0518	5.93						k	O
Gl 615.1B	0518	6.1	Gl	ab	5.090 o	98.26 o		k	
Gl 617 A *	0883	8.33						IK	Y
Gl 617 B *	0883	10.45	Gl	ab	64.0	1014.42		IK	
Gl 618 A *	1300	11.17						K	Y
Gl 618 B	1300	14.72	Gl	ab	8.6	92.59			
Gl 620.1A *	078	4.85						K	Y
Gl 620.1B *	078	10.46	GJ	ab *	348	6244.31		K	
Gl 621	0602	7.30						K	Y
...		10.60	Gl	ab	3.0	69.75			
Gl 624.1A	0462	1.1						K	Y
Gl 624.1B	0462	7.1	Gl	ab	5.1	154.50			
Gl 627 A	050	6.17						k	O
Gl 627 B	050	6.34	Gl	ab	2.2337 o	44.67 o			
Gl 629.2A	0509	8.15						k	O
...		13.53	Gl	ab	1170.0	32171.26			
Gl 630.1A	0690	12.09						3 k	O*
Gl 630.1B	0690	14.19	Gl	ab	25.7	521.30			
Gl 646 A	0730	7.82						k	O
Gl 646 B	0730	9.7	Gl	ab	3.9	74.77			
Gl 653 *	0887	7.47						ik	O
Gl 654 *	1047	10.18	Gl	gl 653 - gl 654	18.5	291.91		ik	
Gl 659 A	0495	7.32					S	M IK	Y
Gl 659 B	0495	7.81	Gl	ab	22.3	630.52	S	M IK	
NN	048	11.24							o
NN	048	11.32	GJ91	LTT 6883 - LTT 6882	30	874.74			
Gl 666 A *	1319	6.13						k	O
Gl 666 B *	1319	9.29	Gl	ab	10.415 o	78.96 o		k	
Gl 667 A *	1400	7.02						k	O
Gl 667 C *	1400	10.97	Gl	ac	30.8	307.91		k	
Gl 669 A *	0933	11.27					H	23 M K	Y
Gl 669 B *	0933	12.82	Gl	ab	16	240.01	H	23 M K	
Gl 670 A	0598	3.29						1 K	Y
Gl 670 B	0598	7.8	Gl	ab	3.7	86.60			
Gl 676 A *	0833	9.18						K	Y
Gl 676 B *	0833	12.91	Gl	ab	49	823.29			
Gl 683.2A	054	5.46						K	Y
Gl 683.2B	054	7.8	Gl	ab	1.4	36.29			
Gl 684 A	0679	4.50						2 4 A K	Y
Gl 685	0711	9.23	Gl	gl 684 - gl 685	738.0	15212.01		K	
NN	045	9.39							o
NN	045	10.99	GJ91	LTT 15241 -LTT 15242	57	1772.81			

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	B–V	U–B [9]	R–I
Gl 690 A	BD +71 851	+71:851*	0.338	341.0	-0.8	dM0	9.20	+1.10	+1.01	+0.44
...							13.0			
Gl 694.1A	HR 6636	LDS 1874	0.268	177.0	-13.7	F5 IV-V	4.58	+0.42	+0.01	
Gl 694.1B	HR 6637	LDS 1874	0.277	175.1	-10.9	F8 V	5.79	+0.53	+0.02	
Gl 695 A *	HR 6623	LDS 1002	0.814	202.9	-16.7	G5 IV	3.42	+0.75	+0.39	+0.24
Gl 695 B *	LHS 3325	LDS 1002	0.827	204.2	-13.9	M3 J	10.35	+1.49	+1.03	+1.10
Wo 9615 A	HR 6771		0.102	322.4	-23.9	A4 V	3.73	+0.12	+0.10	-0.04
Wo 9615 B			0.102	322.4			14.			+0.40
Gl 703	BD +15 3364	LDS 1005	0.210	198.4	25.5	G6	8.68	+0.65	+0.16	
...		LDS 1005								
NN *	G204-058	NLTT	1.091	197.8		m	11.87	+1.58		+1.07
NN	G204-057	NLTT *	1.091	197.8		m	13.53	+1.77		+1.24
Gl 720 A	BD +45 2743	+45:2743	0.566	053.0	-31.2	dM2	9.85	+1.42	+1.15	+0.73
Gl 720 B	G205-032	VBs 9*	0.566	053.0		m	13.02	+1.60		+1.18
GJ 1230 A	G184-019	NLTT	0.501	085.3		k-m	12.4	+1.71	+1.19	+1.38
GJ 1230 B	LHS 3404	391- 2*	0.501	085.3		m	14.			
Gl 725 A *	HD 173739	LDS 1466	2.273	323.3	-0.8	dM4	8.90	+1.52	+1.11	+1.06
Gl 725 B *	HD 173740	LDS 1466	2.272	323.1	1.2	dM5	9.71	+1.59	+1.14	+1.15
Gl 732 A	LHS 469	L 489-58	1.011	161.1		sdG0	12.70	+1.53	+1.12	+1.23
Gl 732 B			1.011	162.			16.			
Gl 734 A	HD 230017		0.12	95.	-26.8	dM0	9.44	+1.36	+1.30	+0.66
Gl 734 B			0.12	95.			12.3			
Gl 737 A	HD 175224	-56:7546A*	0.412	186.2	-13.5	K7 V	9.45	+1.42	+1.1	+0.75
Gl 737 B		-56:7546B*	0.412	186.2	-15.8	K5 V	10.00			+0.84
Gl 743.1A	HR 7226	-37:13048*	0.289	160.9	-53.2	F8 V	4.87	+0.52	+0.00	+0.29
Gl 743.1B	HR 7227		0.289	160.9	-51.3	F8 V	5.00			
Gl 745 B *	HD 349726	LDS 1017	0.578	234.7	31.7	sdM2	10.75	+1.58		+0.93
Gl 745 A *	G184-048	LDS 1017	0.578	234.7	32.1	sdM2	10.76	+1.58		+0.93
Gl 748.2A	BD +01 3942	+ 1:3942	0.513	041.9		K4	10.20	+1.19		+0.51
Gl 748.2B	LHS 3448	R 651 *	0.513	041.9		k-m	11.17	+1.36		+0.63
Wo 9652 A	G185-012	R 733	0.726	305.3		M3	11.55			+1.13
Wo 9652 B	G185-013	R 734*	0.726	305.3		M3.5	13.27			+1.21
Gl 752 A *	HD 180617	+ 4:4048A	1.466	204.2	36.3	M3.5Ve	9.11	+1.50	+1.15	+1.02
Gl 752 B	LHS 474	+ 4:4048B*	1.461	203.1		dM5 e	17.52	+2.2		+1.83
Gl 754.1B *	L 923-22	LDS 678	0.199	198.	10.	dM5	12.12	+1.63	+1.42	+1.09
Gl 754.1A *	W131	LDS 678	0.199	198.		DQ5	12.28	+0.06	-0.83	+0.04
NN	V811A		0.054	222.	-20.5	dM1	10.38	+1.46	+1.22	+0.77
NN	V811B		0.054	222.			12.52	+1.52		+0.99
Gl 764.1A	HD 184860	-10:5130*	0.385	225.7	68.0	K2 V	8.58	+1.01	+0.82	+0.52
Gl 764.1B			0.385	225.7	68.6	K7	10.2			
Gl 767 A	HD 331161	+31:3767A	0.623	131.0	-4.4	M0.5	10.15	+1.48	+1.17	+0.85
Gl 767 B	LHS 3483	+31:3767B*	0.623	131.0	-3.5	M2 :	11.10	+1.52		
Gl 768.1A	HR 7560	+10:4073*	0.274	120.0	-0.2	F8 V	5.11	+0.55	+0.07	
Gl 768.1B			0.274	120.0	-1.2	M3	13.10			+1.18
GJ 1245 A	G208-044	NLTT	0.731	143.1		M5.5 V e	13.41	+1.90		+1.65
GJ 1245 B	G208-045	NLTT *	0.731	143.1		m	14.01	+1.98		+1.71

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 690 A	0537	7.85						iK	O
...		11.65	Gl	LP 44-44	540	14074.06			
Gl 694.1A	0549	3.28						4 A K	Y
Gl 694.1B	0549	4.49	Gl	ab	30.3	772.45		K	
Gl 695 A *	1151	3.73					W630	2 4M K	Y
Gl 695 B *	1151	10.66	Gl	ab	34.0	413.43	W630	M K	
Wo 9615 A	0486	2.16						1 4 K	Y
Wo 9615 B	0486	12.	GJ91	ab	25.4	731.47			
Gl 703	0717	7.96						K	Y
...		99.9	LDS	ab	114.	2225.29			
NN *	0880	11.59							o
NN	0880	13.25	GJ91	G 204-58 - G 204-57	8.5	135.19			
Gl 720 A	0678	9.01						K	Y
Gl 720 B	0678	12.18	Gl	ab	112	2312.00			
GJ 1230 A	136	13.1							o
GJ 1230 B	136	15.	GJ	ab	6.04	62.16			
Gl 725 A *	2861	11.18						3 iK	Y?
Gl 725 B *	2861	11.99	Gl	ab	15.66 o	54.74 o		3 iK	
Gl 732 A	0752	12.08							o
Gl 732 B	0752	15.	Gl	ab	12	223.34			
Gl 734 A	0621	8.41						iK	O
Gl 734 B	0621	11.3	Gl	ab	5.2	117.20			
Gl 737 A	0731	8.77						K	Y
Gl 737 B	0731	9.32	Gl	ab	3.6	68.93		K	
Gl 743.1A	068	4.03					H	M k	Y
Gl 743.1B	068	4.16	Gl	ab	1.907 o	28.04 o	H	M K	
Gl 745 B *	1122	11.00						k	O
Gl 745 A *	1122	11.01	Gl	ab	115	1434.51		k	
Gl 748.2A	0459	8.51							o
Gl 748.2B	0459	9.48	Gl	ab	8	243.94			
Wo 9652 A	0479	9.95							o
Wo 9652 B	0479	11.67	GJ91	ab	45	1314.85			
Gl 752 A *	1767	10.35						ik	Y?
Gl 752 B	1767	18.76	Gl	ab	74	586.13		3	
Gl 754.1B *	0988	12.09						K	Y
Gl 754.1A *	0988	12.25	Gl	ab	27.5	389.56			
NN	048	8.79						K	Y
NN	048	10.93	GJ91	V 811A - V 811B	6.2	180.78			
Gl 764.1A	0525	7.18					gLeo	m k	O
Gl 764.1B	0525	8.8	Gl	ab	5.0	133.29	gLeo	m k	
Gl 767 A	0741	9.50						iK	O
Gl 767 B	0741	10.45	Gl	ab	3.6	68.00		iK	
Gl 768.1A	059	3.96						23 A K	Y
Gl 768.1B	059	11.95	Gl	ac	22.5	533.74		K	
GJ 1245 A	2120	15.04						3	Y
GJ 1245 B	2120	15.64	GJ	ab	8.2	54.13		3	

TABLE A1-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	B–V	U–B [9]	R–I
Gl 771 A	HR 7602	+ 6:4357*	0.481	174.8	-40.7	G8 IV	3.72	+0.86	+0.48	+0.31
Gl 771 B			0.481	174.8		M3	11.4			
Gl 773 A	HD 188807	LDS 4824	0.516	189.1	-10.6	K4 V	9.30	+1.33	+1.21	+0.56
Gl 773 B	LHS 3503	LDS 4824	0.520	188.1		m	15.36			+1.54
Gl 774 A	LHS 3513	LDS 698	0.863	172.5	72.	m	11.35	+1.48	+0.98	+0.96
Gl 774 B	LHS 3512	LDS 698	0.863	172.5	33.	m	12.82	+1.56	+1.01	+1.11
Gl 777 A	HR 7670	+29:3872A	0.864	127.7	-45.9	G8 IV-V	5.71	+0.73	+0.37	+0.27
Gl 777 B	G125-055	+29:3872B*	0.857	127.9	-5.0	M4 :	14.37	+1.67	+1.12	+1.37
Gl 781.1A	LHS 3524	LDS 704	0.796	158.8		M3	12.25	+1.55	+1.11	+1.06
Gl 781.1B	LHS 3523	LDS 704	0.796	158.8		M3.5	12.50	+1.63	+1.07	+1.18
Gl 783 A *	HR 7703	-36:13940A	1.633	163.8	-129.8	K3 V	5.32	+0.87	+0.46	+0.34
Gl 783 B *	LHS 487	-36:13940B*	1.633	163.8		M3.5	11.5			
Gl 783.2A	HD 191785	+15:4074A*	0.574	314.7	-48.3	K1 V	7.33	+0.85	+0.49	+0.30
Gl 783.2B	G143-035	+15:4074B*	0.572	312.9		dM	13.94	+1.62	+1.14	+1.24
Gl 784.2A	G024-010	574- 1	0.633	202.8		dM5	13.19	+1.54	+1.22	+1.20
Gl 784.2B	G024-009	NLTT *	0.633	202.8		DA7	15.72	+0.37	-0.40	+0.29
GJ 1255 AB	HD 197433	+75:752*	0.650	30.7		K0 V	8.0	+0.86	+0.44	+0.35
GJ 1255 -	HD 199476	+74:889	0.705	35.1	-29.9	G8 V	7.80	+0.70	+0.15	
Gl 797 A	HR 7914	LDS 1045	0.338	21.8	-35.8	G5 V	6.45	+0.63	+0.09	+0.22
Gl 797 B	G144-026	LDS 1045	0.330	22.	-35.4	m	11.88	+1.55	+1.26	
Gl 800 A	BD -19 5899	-19:5899*	1.10	144.	5.0	dM2	10.84	+1.43	+1.0	+0.85
Gl 800 B			1.10	144.			14.0			
NN	LTT 16064	LDS 1046	0.253	50.		k-m	11.27			+0.84
NN	LTT 16065	LDS 1046	0.253	50.		m	12.54			+1.15
Gl 806.1A	HR 7949	+33:4018A*	0.484	47.2	-10.9	K0- III	2.45	+1.03	+0.87	
Gl 806.1B	LHS 5358a	+33:4018B*	0.480	047.5		M4	13.40	+1.66		+1.11
Gl 808.1	HR 7943		0.211	119.3	-14.9	F1 IV	5.10	+0.35	+0.05	+0.20
...							15.5			
Gl 810 A *	LHS 501	756- 19*	1.486	107.5		M3.5 J	12.45	+1.59		+1.26
Gl 810 B	LHS 500	756- 18*	1.486	107.5			14.55	+1.72		+1.42
NN	G187-013	LDS 1049	0.356	113.		m	12.29			+1.08
NN	G187-014	LDS 1049	0.356	113.		m	13.12			+1.19
Gl 816.1A	HD 200560	+45:3371	0.422	69.5	-13.6	K2.5 V	7.68	+0.97	+0.78	
Gl 816.1B			0.422	69.5			13.0			
Gl 819 A	HD 200968	-14:5936*	0.392	93.9	-34.0	K1 Ve	7.15	+0.90	+0.58	+0.32
Gl 819 B			0.392	93.9		M0	10.2			
Gl 820 A *	HR 8085	+38:4343A*	5.220	52.4	-64.8	K5 Ve	5.21	+1.18	+1.11	+0.47
Gl 820 B *	HR 8086	+38:4344*	5.220	52.4	-64.3	K7 Ve	6.03	+1.37	+1.23	+0.60
Wo 9721 A	BD - 5 5480		0.058	281.0	11.	dM2	9.44	+1.13	+1.00	+0.50
Wo 9721 B	V332		0.058	281.0			13.40	+1.63		+1.11
Gl 822.1A	HR 8130	+37:4240A*	0.465	20.0	-23.1	F0 IV	3.82	+0.38	+0.03	+0.14
Gl 822.1C	G211-014	+37:4240B*	0.463	019.8		M3	12.00	+1.53	+1.14	+1.04
NN	LTT 16240	LDS 1053	0.217	77.		m	12.68			+1.22
NN	LP 341-14	LDS 1053	0.217	77.		m	13.49			+1.23
NN	G145-031	R 773A	0.420	47.		M3	12.47			+1.09
NN	LTT 16246	R 773C*	0.420	47.		M4	14.			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 771 A	0743	3.07						k	O
Gl 771 B	0743	10.8	Gl	ab	12.8	241.11			
Gl 773 A	0474	7.68						ik	O
Gl 773 B	0474	13.74	LDS	ab	62.	1830.68			
Gl 774 A	0746	10.71						k	O
Gl 774 B	0746	12.18	Gl	ab *	16.8	315.19		k	
Gl 777 A	0598	4.59						k	O
Gl 777 B	0598	13.25	Gl	ab *	178	4166.00		K	
Gl 781.1A	0507	10.78							o
Gl 781.1B	0507	11.03	Gl	ab	41	1131.82			
Gl 783 A *	1771	6.56						k	O
Gl 783 B *	1771	12.7	Gl	ab	7.1	56.11			
Gl 783.2A	051	5.87						K	o
Gl 783.2B	051	12.48	Gl	ab	108	2963.83			
Gl 784.2A	0444	11.43							o
Gl 784.2B	0444	13.96	Gl	ab	102	3215.27			
GJ 1255 AB	0404	6.0							O
GJ 1255 -	0447	6.05	GJ	gl 1255AB - gl 1255-	4440	153816.03		a k	
Gl 797 A	0498	4.94					h*	a K	Y?
Gl 797 B	0498	10.37	Gl	ab	125	3513.02	h*	K	
Gl 800 A	0672	9.98						k	O
Gl 800 B	0672	13.1	Gl	ab	2	41.65			
NN	052	9.85					h		o
NN	052	11.12	GJ91	LTT 16064 -LTT 16065	15	403.73	h		
Gl 806.1A	0520	1.03						2 K	Y
Gl 806.1B	0520	11.98	Gl	ab	78.1	2102.07			
Gl 808.1	0494	3.57						4 K	Y
...		13.97	Gl	ab	4.3	121.83			
Gl 810 A *	0789	11.94							o
Gl 810 B	0789	14.04	Gl	ab	120	2128.65			
NN	059	11.14							o
NN	059	11.97	GJ91	G 187-13 - G 187-14	57	1352.14			
Gl 816.1A	0458	5.98						K	Y
Gl 816.1B	0458	11.3	Gl	ab	3.1	94.73			
Gl 819 A	0681	6.32					H	M K	Y
Gl 819 B	0681	9.4	Gl	ab	4.9	100.70	H	M	
Gl 820 A *	2887	7.51					61C	m k	O
Gl 820 B *	2887	8.33	Gl	ab	24.554 o	85.05 o	61C	m k	
Wo 9721 A	0446	7.69						2 IK	Y
Wo 9721 B	0446	11.65	GJ91	ab	25	784.52			
Gl 822.1A	0514	2.37						4 K	Y
Gl 822.1C	0514	10.55	Gl	ab-c	89.68	2441.93			
NN	065	11.74							
NN	065	12.55	GJ91	LTT 16240 -LP 341-14	26	559.83			
NN	049	10.92					h		o
NN	049	12.	GJ91	G 145-31 - LTT 16246	4	114.25	h		

TABLE A1-left (CONTINUED

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 825.4A	HR 8148	-26:15541A	0.643	236.8	-17.2	G5 V	6.63	+0.73	+0.23	+0.29
Gl 825.4B	LHS 3656	-26:15541B*	0.643	236.8	-21.2	dG6	9.6			
Gl 828 A	HD 203985	-45:14340*	0.314	55.7	8.2	K0 V	7.48	+0.91	+0.71	+0.42
Gl 828 B	L 353-009	353- 9*	0.31	54.		m	14.1			
NN	G026-014	LDS 5247	0.669	180.5		dM	13.35	+1.68		+1.22
NN	LHS 3688	LDS 5247	0.669	180.5		m	14.5			+1.29
Gl 834 A	G212-048	286- 6	0.263	233.		dM0	10.34	+1.42	+1.1	+0.77
Gl 834 B	LP 286-5	286- 5*	0.263	233.			12.3			
NN	G126-031	NLTT	0.259	90.		m	13.65			+1.25
NN	G126-030	NLTT *	0.259	90.		m	14.81			+1.38
NN	HD 207496	-77:1092	0.288	129.0	-10.6	K3/4 V	8.24	+1.00	+0.89	
NN	U541B		0.288	129.0			10.5			
NN	BD +32 4292		0.01	315.			10.0			
NN			0.01	315.			10.2			
Gl 841 A	CD -5113128	-51:13128*	0.39	189.	-9.	M0	10.4	+1.5	+0.9	+1.31
Gl 841 B	LTT 8768	283- 7*	0.39	189.		DQ7	14.68	+0.16	-0.80	
NN	HD 211472	+53:2831A	0.221	67.1	-7.0	K1 V	7.51	+0.81	+0.39	
NN	G232-062	+53:2831B*	0.222	76.		m	14.			
Gl 852 A	LHS 3787	LDS 782	0.537	239.1	54.0	dM4.5e	13.4	+1.7	+1.2	+1.27
Gl 852 B	LHS 3788	LDS 782	0.537	239.1		dM5 e	14.4	+1.9	+1.8	+1.46
Gl 853 A *	HR 8501	-54:9222*	0.778	145.9	-13.5	G1 V	5.39	+0.60	+0.08	+0.22
Gl 853 B *			0.778	145.9			9.9			
Gl 857.1A	BD +21 4747	+21:4747	0.200	244.3	-6.3	dK7 e	8.86	+1.19	+1.10	+0.54
Gl 857.1B		399-274	0.200	244.3	-2.5		12.4			
Gl 859 A	HR 8545	-17:6521	0.222	90.0	-0.3	G3 V	6.21	+0.62	+0.07	+0.22
Gl 859 B	HR 8544	-17:6520*	0.261	92.2	2.0	G3 V	6.4			
NN	LTT 9123	LDS 2951	0.260	183.		m	10.92			+0.97
NN	LTT 9124	LDS 2951	0.260	183.		m	12.64			+1.16
Gl 867 A *	HD 214479	LDS 4984	0.459	97.0	-8.7	dM2 e	9.10	+1.51	+1.09	+0.93
Gl 867 B *	L 717-022	LDS 4984	0.459	97.0		dM4 e	11.45	+1.60	+1.12	+1.20
Gl 871 A	HR 8635	-47:14307	0.334	175.1	'17.3	G1 V	6.00	+0.57	+0.06	+0.20
Gl 871 B		-47:14308*	0.334	175.1		M1	11.10	+1.41		
Gl 872 A	HR 8665	+11:4875A*	0.538	155.0	-6.0	F6 IV-V	4.19	+0.50	-0.03	+0.19
Gl 872 B	LHS 3852	+11:4875B*	0.538	155.0	-7.2	M1	11.7			
NN	G028-024	LDS 5021	0.448	128.		dM0	11.26	+1.45	+1.19	+0.82
NN	LP 581-35	LDS 5021	0.448	128.		DB	15.7			
Gl 881 *	HR 8728	-30:19370*	0.372	115.6	6.1	A3 V	1.16	+0.09	+0.08	-0.06
Gl 879 *	HR 8721	-32:17321*	0.360	114.6	9.0	K5 Ve	6.48	+1.10	+1.02	+0.41
NN	CD -2417443	LDS 5035	0.389	148.		M1:	11.57	+1.53		+0.87
NN	CD -2417445	LDS 5035	0.389	148.		M2	11.61	+1.55		+0.88
Gl 893.3A	CD -4115204	LDS 5063	0.255	182.		g-k	11.57	+0.90		+0.54
Gl 893.3B	LP 1034-093	LDS 5063	0.255	182.			17.4			
Gl 894.2A	HR 8866	-14:6448A	0.312	108.5	10.3	G5 IV	5.2	+0.79	+0.41	+0.26
Gl 894.2B	Viln82 no 44	-14:6448B*	0.321	106.1	10.3	K2 V	7.61	+0.91	+0.67	+0.29
NN	G190-028	NLTT	0.404	95.		M2	11.87	+1.52	+1.09	+1.14
NN	G190-027	NLTT *	0.404	95.		M3 :	12.44	+1.61	+1.06	+1.28

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 825.4A	0565	5.39						K	Y
Gl 825.4B	0565	8.4	Gl	ab	3.2	79.27		K	
Gl 828 A	0670	6.61						k	O
Gl 828 B	0670	13.2	NLTT	ab	90	1880.04			
NN	0686	12.53							o
NN	0686	13.7	LDS	G 26-14 - LHS 3688	4	81.61			
Gl 834 A	0498	8.83							o
Gl 834 B	0498	10.8	Gl	ab	2.5	70.26			
NN	057	12.43							o
NN	057	13.59	GJ91	G 126-31 - G 126-30	63	1546.91			
NN	049	6.69						K	Y
NN	049	9.0	GJ91	HD 207496 - U 541B	7.85	224.22			
NN	0496	8.5							o
NN	0496	8.7	GJ91	BD +32 4292 - anon.	3.4	95.94			
Gl 841 A	0684	9.6						3 K	Y
Gl 841 B	0684	13.86	Gl	ab	26.6	544.28			
NN	047	5.87						K	Y
NN	047	12.	GJ91	HD 211472 - G232-62	78	2322.72			
Gl 852 A	0981	13.4						23 k	Y
Gl 852 B	0981	14.4	Gl	ab	8.5	121.27		23	
Gl 853 A *	0824	4.97						K	Y
Gl 853 B *	0824	9.5	Gl	ab	3.4	57.75			
Gl 857.1A	0476	7.25						IK	Y
Gl 857.1B	0476	10.8	Gl	ab	1.3	38.22		K	
Gl 859 A	0608	5.13						4 A K	Y
Gl 859 B	0608	5.3	Gl	ab	4.4	101.29		4 K	
NN	071	10.18							o
NN	071	11.90	GJ91	LTT 9123 - LTT 9124	15	295.69			
Gl 867 A *	1154	9.41						23 IK	Y
Gl 867 B *	1154	11.76	Gl	ab	24.0	291.08		23	
Gl 871 A	049	4.45					W630	M K	Y
Gl 871 B	049	9.55	Gl	ab	7.8	222.79	W630	M	
Gl 872 A	0500	2.7					W630	4MA K	Y
Gl 872 B	0500	10.2	Gl	ab	11.8	330.30	W630	M K	
NN	045	9.53							o
NN	045	14.0	GJ91	G 28-24 - LP 581-35	17	528.73			
Gl 881 *	1537	2.09						1 4 K	Y
Gl 879 *	1281	7.02	Gl	gl 881 - gl 879	7080.0	64470.26		23 K	
NN	047	9.93							o
NN	047	9.97	GJ91	CD -2417443/445	75	2233.38			
Gl 893.3A	0483	10.0							o
Gl 893.3B	0483	15.8	LDS	ab	18.	521.59			
Gl 894.2A	051	3.7						K	Y
Gl 894.2B	051	6.15	Gl	ab	13.0	356.76		K	
NN	0672	11.01							o
NN	0675	11.59	GJ91	G 190-28 - G 190-27	17	354.06			

TABLE A1-left (CONTINUED

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ ("/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	B–V	U–B [9]	R–I
Gl 896 A *	BD +19 5116	+19:5116A	0.560	091.7	1.1	dM4 e	10.38	+1.54	+1.08	+1.13
Gl 896 B	LHS 3966	+19:5116B*	0.560	091.7	-1.2	dM6 e	12.4	+1.65	+1.12	+1.62
Gl 898 *	HD 221503	LDS 816	0.390	126.8	0.5	K5/M0 V	8.60	+1.28	+1.22	+0.53
Gl 897 A *	BD -17 6768	LDS 816	0.400	126.	-1.9	M3.5 J	10.95	+1.51	+0.95	+1.03
NN	CP -4911759		0.142	259.9		M0	10.09	+1.37		+0.64
NN	BPM 45048		0.127	272.			12.37	+1.44		+1.09
Gl 905.2A	G130-006	LDS 1070	0.233	256.	-24.3	dM5	11.67	+1.56	+1.18	+1.09
Gl 905.2B	G130-005	LDS 1070	0.233	256.	17.	DA4	12.90	+0.15	-0.61	
Gl 909 A *	HR 9038	+74:1047*	0.309	79.6	1.7	K3 V	6.40	+0.98	+0.71	+0.38
Gl 909 B *			0.309	79.6		M2	11.7			
NN	G273-186	LDS 830	0.193	84.		M4	12.93			+1.23
NN	G273-185	LDS 830	0.193	84.		M4	12.98			+1.11
GJ 1294 A	HD 224953	-68:2373*	0.287	134.7		M0 V	9.66	+1.39	+1.18	+0.68
GJ 1294 B			0.34	140.			10.6			

TABLE A1-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 896 A *	1519	11.29						23 K	Y
Gl 896 B	1519	13.3	Gl	ab	3.7	34.09		23 K	
Gl 898 *	0775	8.05						IK	Y
Gl 897 A *	0775	10.40	Gl	gl 898 - gl 897	336	6067.89		2 K	
NN	051	8.63					s		Y
NN	051	10.91	GJ91	CP -4911759-BPM45048	25	686.07	S	M	
Gl 905.2A	0556	10.40						K	Y
Gl 905.2B	0556	11.63	Gl	ab *	175	4405.18		K	
Gl 909 A *	0965	6.32						K	Y
Gl 909 B *	0965	11.6	Gl	ab	4.6	66.72			
NN	056	11.67							o
NN	056	11.72	GJ91	G 273-186 -G 273-185	20	499.85			
GJ 1294 A	060	8.55							o
GJ 1294 B	060	9.5	GJ	ab	3.7	86.31			

TABLE A2-left

CATALOGUE OF NEARBY WIDE TRIPLE SYSTEMS

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	*V* [8]	*B–V*	*U–B* [9]	*R–I*
Gl 4 A *	HD 38	+45:4408A	0.839	101.8	0.0	dK6 e	8.97	+1.44	+1.21	+0.71
Gl 4 B *	LHS 1017	+45:4408B	0.885	98.3	0.1	M0.5 V	9.02	+1.45	+1.20	
Gl 2 *	BD +44 4548	+44:4548*	0.894	100.5	0.1	dM2 e	9.93	+1.49	+1.18	+0.85
Gl 48 *	BD +70 68b	+70: 68b	1.783	101.2	0.8	dM3.5e	10.04	+1.46	+1.15	+1.08
Gl 22 AC*	BD +66 34	+66: 34A	1.748	097.8	-4.0	dM2.5e	10.38	+1.54	+1.16	+0.99
Gl 22 B *	LHS 115	+66: 34B	1.748	097.8		dM3.5	12.4			
Gl 55.3A	HR 377	LDS 42	0.422	74.0	4.0	F6 IV J	4.99	+0.47	+0.02	+0.26
Gl 55.3B		-69:52B*	0.416	73.4	4.9	G5	7.2			
Gl 55.1A	HD 7693	LDS 42	0.414	73.9		K2 V	7.80	+0.98	+0.82	+0.46
GJ 1047 A	G074-019	NLTT *	0.919	128.3		m	14.05	+1.68		+1.13
GJ 1047 B	G074-019	NLTT *	0.919	128.3		m	14.05			
GJ 1047 C	G074-018	NLTT *	0.919	128.3		m	14.26	+1.70	+1.50	+1.16
Gl 106.1A	HR 804	+ 2:422A*	0.207	224.5	-5.1	A3 V	3.56	+0.09	+0.07	
Gl 106.1B		+ 2:422B*	0.207	224.5	-12.5	dF3	6.3			
Gl 106.1C	BD +02 418	+ 2:418	0.215	220.		K5	10.16	+1.36	+1.28	+0.57
Gl 118.2A	HD 18143	LDS 883	0.324	124.6	31.8	dK2	7.60	+0.93	+0.71	+0.30
Gl 118.2B		+26:484	0.324	124.6	27.	dM0	9.80	+1.40	+1.50	
Gl 118.2C	G036-043	LDS 883	0.322	125.		m	13.86	+1.58	+1.17	+1.25
Gl 140 A	V419	356- 14	0.227	122.		dM0	10.64	+1.51	+1.28	+0.90
Gl 140 C	L 1307-14	356- 15*	0.227	122.		m	11.89	+1.50		+1.01
Gl 140 B			0.227	122.			12.0			
Gl 166 A *	HR 1325	LDS 114	4.083	213.1	-42.7	K1 Ve	4.43	+0.82	+0.45	+0.31
Gl 166 B *	HD 26976	LDS 114	4.073	212.4	-21.	DA4	9.52	+0.03	-0.68	-0.10
Gl 166 C *	LHS 25	- 7:781B*	4.073	212.4	-45.9	dM4.5e	11.17	+1.67	+0.83	+1.31
Gl 187.2A	HR 1637		0.178	187.5	0.6	F0 V	5.00	+0.33	-0.01	
... C							9.43			
... B							12.2			
Gl 194 A *	HR 1708	+45:1077*	0.431	169.2	22.2	G5 III	0.71	+0.80	+0.44	+0.28
Gl 195 A	G096-029	+45:1077C*	0.415	170.3	31.2	dM2	10.20	+1.50	+1.24	+0.94
Gl 195 B			0.415	170.3		M4 :	13.7			
Gl 216 A *	HR 1983	LDS 148	0.476	218.5	-9.7	F6 V	3.58	+0.47	+0.01	+0.16
Gl 216 B *	HR 1982	LDS 148	0.470	220.7	-8.4	K2 V	6.13	+0.94	+0.74	+0.35
... C	VB 1						15			
Gl 264.1A	HR 2667	LDS 175	0.398	343.8	86.4	G3 V	5.55	+0.64	+0.05	+0.22
Gl 264.1B	HR 2668	-43:2907*	0.398	343.8	90.4	K0 V	6.79	+0.80	+0.37	+0.28
Gl 264	HD 53680	LDS 175	0.404	346.6	88.0	K5 V	8.68	+1.18	+1.13	+0.49
Gl 274 A	HR 2852	+32:1562*	0.232	41.6	3.1	F0 V	4.18	+0.32	-0.03	
Gl 273.1	HD 58830	+32:1561*	0.232	44.4	-4.1	dK8	7.74	+0.94	+0.65	+0.37
Gl 274 B		+32:1562*	0.232	41.6			12.5			
Gl 278 A	HR 2891	+32:1581*	0.198	238.9	6.0	A1 V	1.94	+0.04	+0.02	
Gl 278 B	HR 2890	+32:1581*	0.198	238.9	-1.2	A m	2.85			
Gl 278 C	BD +32 1582	+32:1582	0.232	241.4	-1.9	M0.5Ve	9.07	+1.49	+1.04	+0.78
Gl 294 A	HR 3138	LDS 198	0.540	76.7	14.1	G2 V	5.60	+0.57	+0.02	+0.20
Gl 294 B	CD -59 1774	LDS 198	0.528	077.8		k	9.88	+1.34	+1.09	+0.76
Gl 294 C			0.528	077.8			13.5			

TABLE A2-right

CATALOGUE OF NEARBY WIDE TRIPLE SYSTEMS

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 4 A *	0870	8.67					h*	iK	Y
Gl 4 B *	0870	8.72	Gl	ab	11.698 o	134.46 o	h	IK	
Gl 2 *	0870	9.63	Gl	gl 4 - gl 2	328.0	5276.61 •	h	IK	
Gl 48 *	1155	10.35						3 k	Y?
Gl 22 AC*	1006	10.39	Gl	gl 48 - gl 22	18600	225388.09	eInd	3 m k	
Gl 22 B *	1006	12.4	Gl	ac-b	3.6	50.08	eInd	m	
Gl 55.3A	0507	3.5					H	4M K	Y
Gl 55.3B	0507	5.7	Gl	ab	5.5	151.83	H	M K	
Gl 55.1A	053	6.42	Gl	gl 55.3 - gl 55.1	318	8778.48			
GJ 1047 A	0463	12.38							o
GJ 1047 B	0463	12.38	GJ	ab	1	30.23			
GJ 1047 C	0463	12.59	GJ	ab-c	32	967.32			
Gl 106.1A	0469	1.92					S	1 4M K	Y
Gl 106.1B	0469	4.7	Gl	ab *	2.8	83.56	S	1 M K	
Gl 106.1C	0420	8.28	Gl	ab-c	738	22023.36	s		
Gl 118.2A	053	6.22					h*	K	O?
Gl 118.2B	052	8.38	Gl	ab	6.5	171.65	h*	iK	
Gl 118.2C	052	12.44	Gl	ab-c	43	1135.51	h*		
Gl 140 A	060	9.53							o
Gl 140 C	060	10.78	Gl	ac	99	2309.32			
Gl 140 B	060	10.9	Gl	ab	1.6	37.32			
Gl 166 A *	2071	6.01						k	O?
Gl 166 B *	2071	11.10	Gl	ab *	82.8	559.56		k	
Gl 166 C *	2071	12.75	Gl	bc	6.8945 o	33.29 o		23 k	
Gl 187.2A	0471	3.4						1 4 K	Y
... C		7.80	Gl	ac	90.1	2677.34			
... B		10.57	Gl	ab	5.2	154.52			
Gl 194 A *	0790	0.20					h	K	Y
Gl 195 A	0763	9.61	Gl	gl 194 - gl 195	720.0	12755.73	h	K	
Gl 195 B	0763	13.1	Gl	ab	3.0	55.03	h		
Gl 216 A *	1249	4.06					S	1 4MA K	Y
Gl 216 B *	1249	6.61	Gl	ab	96.3	1079.11	S	MA K	
... C		15.48	Gl	ab-c	1128	12639.99			
Gl 264.1A	066	4.65					H	M k	O?
Gl 264.1B	066	5.89	Gl	ab	20.5	434.72	H	M k	
Gl 264	060	7.57	Gl	gl 264.1 - gl 264	185	3923.09	H	M k	
Gl 274 A	0591	3.04						1 4 K	Y
Gl 273.1	0483	6.16	Gl	gl 274 - gl 273.1	214	5067.88		Ik	
Gl 274 B	0591	11.4	Gl	ab	3.4	80.52			
Gl 278 A	0683	1.11						1 4M K	Y
Gl 278 B	0683	2.02	Gl	ab *	6.295 o	92.17 o		1 4M K	
Gl 278 C	0683	8.24	Gl	ac *	72.5	1485.65		23 M K	
Gl 294 A	0630	4.60						K	Y
Gl 294 B	0630	8.88	Gl	ab	61	1355.16			
Gl 294 C	0630	12.5	Gl	bc	2.3	51.10			

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TABLE A2-left (CONTINUED)

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 319 A	BD +10 1857	+10:1857AB*	0.673	162.4	20.4	M0 J	9.70	+1.41	+1.27	+0.73
Gl 319 C	G046-002	+10:1857C*	0.673	162.4	22.4	M3.5	11.79	+1.54	+1.20	+1.05
Gl 319 B		+10:1857AB*	0.673	162.4			13.1			
Gl 331 A	HR 3569	+48:1707A*	0.500	242.4	9.0	A7 IV	3.14	+0.19	+0.08	
Gl 332 A	HR 3579	+42:1956	0.506	240.2	27.1	F3 V	4.11	+0.37	+0.02	
Gl 331 B	LHS 2083	+48:1707BC*	0.500	242.4	15.0	dM1 J	10.8			
Gl 421 A	BD -17 3336	LDS 342 t	0.754	169.3	5.0	K7 V	9.97	+1.36	+1.21	+0.60
Gl 421 B	BD -17 3337	LDS 342 t	0.754	169.3	18.0	K7 V	10.04	+1.38	+1.21	+0.61
Gl 421 C	LHS 2378	LDS 342 t	0.754	169.3	18.	M3.5	13.64	+1.58	+1.05	+1.16
Gl 586 A	HD 137763	LDS 531	0.365	168.5	8.2	K2 V	6.92	+0.81	+0.49	+0.29
Gl 586 B	HD 137778	LDS 531	0.379	165.5	8.0	K2 V	7.58	+0.92	+0.65	+0.30
Gl 586 C	G151-061		0.318	172.		k-m	15.41	+1.84		+1.42
Gl 615.2A	HR 6063	+34:2750A*	0.287	253.6	-12.2	F8 V	5.64	+0.51	-0.00	+0.21
Gl 615.2B	HR 6064	+34:2750B*	0.287	253.6	-14.5	G1 V	6.72			+0.24
Gl 615.2C	G180-042	275- 6	0.305	254.		M3.5	12.31	+1.40		+1.04
Gl 644 A *	HD 152751	LDS 573	1.183	222.2	12.1	M3 J	9.69	+1.57	+1.08	+1.08
Gl 643 *	LHS 427	LDS 573	1.190	222.5	-14.1	sdM4	11.80	+1.69	+1.35	+1.21
Gl 644 C	LHS 429	VBs 8	1.190	222.5	20.	M7	16.78	+1.99		+1.92
Gl 649.1A	HD 153557	+47:2415	0.317	330.1	-6.6	dK8 J	7.83	+0.98	+0.80	+0.34
Gl 649.1C	HD 153525	+47:2411*	0.303	332.5	-7.0	dK8	7.90	+1.00	+0.82	+0.34
Gl 649.1B		+47:2415	0.317	330.1			11.19	+1.47	+1.04	+0.81
Gl 700.1A	HR 6734		0.046	147.1	-38.4	dF3 J	5.24	+0.38	+0.04	+0.22
Gl 700.1B	HR 6733		0.046	147.1	-35.1		5.93			
Gl 700.1C			0.05	147.	-14.0		9.4			
Gl 765 A	HR 7469	+49:3062*	0.260	355.5	-27.3	F4 V	4.48	+0.38	-0.03	
... C		+49:3062C*	0.257	354		M2	c 12.41			
Gl 765 B		+49:3062*	0.260	355.5			13.0			
Gl 794.1	HR 7869		0.088	38.6	-1.3	K0 III	3.11	+1.00	+0.80	+0.46
... B							12.0			
... C							13.5			
Gl 803 *	HD 197481	LDS 720	0.441	142.1	-7.1	M0 Ve	8.81	+1.42	+0.95	+0.85
Gl 799 B *		-32:16135B*	0.429	140.5	-3.0	dM4.5e	11.0			
Gl 799 A *	HD 196982	LDS 720	0.429	140.5	-4.0	dM4.5e	10.99	+1.57	+0.88	+1.33

TABLE A2-right (CONTINUED)

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 319 A	0668	8.82						ik	O
Gl 319 C	0668	10.91	Gl	ab-c	115	2409.47		k	
Gl 319 B	0668	12.2	Gl	ab	2.2	46.09			
Gl 331 A	0713	2.41					h	4 K	Y
Gl 332 A	0663	3.22	Gl	gl 331 - gl 332	22560.0	442842.78	H	1 4M K	
Gl 331 B	0713	10.1	Gl	ab	9.092 o	127.52 o	h	K	
Gl 421 A	0636	8.99						iK	O?
Gl 421 B	0636	9.06	Gl	ab	19	418.12		iK	
Gl 421 C	0636	12.66	Gl	ac	83	1826.51		K	
Gl 586 A	0618	5.87						K	Y
Gl 586 B	0618	6.53	Gl	ab	51.9	1175.38		K	
Gl 586 C	0480	13.82	Gl	ac	1212	27448.22			
Gl 615.2A	0444	3.88						K	Y
Gl 615.2B	0444	4.96	Gl	ab	6.599 o	148.63 o		K	
Gl 615.2C	0444	10.55	Gl	ab-c	660	20804.68			
Gl 644 A *	1539	10.63						23 IK	Y
Gl 643 *	1719	12.98	Gl	gl 644 - gl 643	72	654.78		K	
Gl 644 C	1539	17.72	Gl	ac	221	2009.80		23 K	
Gl 649.1A	0570	6.61						K	Y
Gl 649.1C	0570	6.68	Gl	ab-c	114	2799.17		K	
Gl 649.1B	0570	9.97	Gl	ab	4.4	108.04			
Gl 700.1A	0583	4.07						1 4 K	Y
Gl 700.1B	0583	4.76	Gl	ab	1.494 o	25.63 o		K	
Gl 700.1C	0583	8.2	Gl	ab-c	100.3	2407.87		K	
Gl 765 A	0540	3.14						1 4 K	Y
... C		11.07	NLTT	ac	19	492.45			
Gl 765 B	0540	11.7	Gl	ab	4.2	108.86			
Gl 794.1	0448	1.4						K	Y
... B		10.2	Gl	ab	66	2061.89			
... C		11.7	Gl	ac	62	1936.93			
Gl 803 *	1069	8.95						23 IK	Y
Gl 799 B *	1228	11.4	Gl	ab	3.9	44.45		23 K	
Gl 799 A *	1228	11.44	Gl	gl 803 - gl 799	4680	61272.86		23 K	

TABLE A3-left

CATALOGUE OF NEARBY WIDE QUADRUPLE SYSTEMS

Gliese [1]	Add. id [2]	LDS, NLTT [3]	μ (″/y) [4]	θ (°) [5]	RV (km s^{-1}) [6]	Sp [7]	V [8]	$B-V$	$U-B$ [9]	$R-I$
Gl 321.3A	HR 3485		0.082	164.6	2.2	A0 V	2.02	+0.04	+0.07	-0.07
Gl 321.3B			0.082	164.6			5.0			
Gl 321.3C			0.08	164.			11.0			
Gl 321.3D			0.08	164.			13.5			
Gl 663 A *	HR 6402	LDS 588	1.235	203.6	0.5	K1 Ve	5.07	+0.85	+0.53	+0.32
Gl 663 B *	HR 6401		1.231	202.0	0.9	K1 Ve	5.11	+0.86	+0.63	
Gl 664 *	HD 156026	LDS 588	1.222	203.1	-0.1	K5 Ve	6.33	+1.16	+1.07	+0.44
... P							13.5			
Gl 767.1A	HR 7534	LDS 1028	0.444	178.9	4.2	F5 IV-V	4.99	+0.47	+0.00	
Gl 765.4A	HD 186858	+33:3582*	0.431	177.7	4.4	K3 V	8.35	+0.99	+0.78	+0.37
Gl 765.4B			0.431	177.7		K3 V	8.54			
Gl 767.1B	HD 225732	LDS 1028	0.443	177.6	4.5	dK6	8.56	+1.04	+0.95	+0.38

TABLE A3-right

CATALOGUE OF NEARBY WIDE QUADRUPLE SYSTEMS

Gliese [10]	π (0.0001″) [11]	M_V [12]	SM [13]	PD [14]	a, Sep (″) [15]	a, E(a) (AU) [16]	Memb. [17]	Age ind. [18]	ASA [19]
Gl 321.3A	0498	0.51						1 4 K	Y
Gl 321.3B	0498	3.5	Gl	ab	2.6	73.07			
Gl 321.3C	0498	9.5	Gl	ac	69.2	1944.81			
Gl 321.3D	0498	12.0	Gl	cd	6.2	174.25			
Gl 663 A *	1876	6.44						K	Y
Gl 663 B *	1876	6.48	Gl	ab	13.91 o	74.15 o		K	
Gl 664 *	1820	7.63	Gl	gl 663 - gl 664	732	5461.08		K	
... P		14.87	Gl	gl 663 A - P	38.6	287.97			
Gl 767.1A	0444	3.23						4 K	Y
Gl 765.4A	0439	6.56	Gl	gl 767.1 - gl 765.4	810	25533.01		K	
Gl 765.4B	0439	6.75	Gl	ab	2.048 o	46.65 o			
Gl 767.1B	0444	6.80	Gl	ab	26.0	819.58		K	