Revised Coordinates and Proper Motions of the Stars in the Luyten Half-Second Catalogue

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ABSTRACT

We present refined coordinates and proper motion data for the high proper motion (HPM) stars in the Luyten Half-Second (LHS) catalogue. The positional uncertainty in the original Luyten catalogue is typically $> 10''$ and is often $> 30''$. We have used the digital scans of the Palomar Observatory Sky Survey (POSS) I and POSS II plates to derive more accurate positions and proper motions of the objects. Out of the 4470 candidates in the LHS catalogue, 4323 objects were manually re-identified in the POSS I and POSS II scans. A small fraction of the stars were not found due to the lack of finder charts and digitized POSS II scans. The uncertainties in the revised positions are typically $\sim 2''$, but can be as high as $\sim 8''$ in a few cases, which is a large improvement over the original data. Cross-correlation with the Tycho-2 and Hipparcos catalogues yielded 819 candidates (with $m_R \lesssim 12$). For these brighter sources, the position and proper motion data were replaced with the more accurate Tycho/Hipparcos data. In total, we have revised proper motion measurements and coordinates for 4040 stars and revised coordinates for 4330 stars. In the printed version of the paper, we present the updated coordinates and proper motion information on 528 sources which represent the high proper motion subset ($\mu > 1''$ yr^{-1}) of the LHS catalogue. The electronic version of the paper[1] contains the updated information on all the 4470 stars in the LHS catalogue.

Subject headings: astronomical data bases: high proper motion – catalogues

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[1]The catalogue is available online at http://www.stsci.edu/∼ksahu/lhs

1. Introduction

High proper motion stars serve as useful probes for the determination of many fundamental parameters, such as the stellar luminosity function, luminosities and masses of individual stars, and the structure and kinematics of the Galaxy. Among the few high-proper motion catalogues available so far, the most exhaustive ones are those of Luyten, which cover both the southern and the northern hemispheres, and that of Giclas et al. which covers only the northern hemisphere. The Lowell Proper Motion Survey by Giclas et al. (1971) has 8991 stars in the northern hemisphere, with $\mu > 0.26''$ yr^{-1}, where μ is the proper motion. Luyten's catalogues can be mainly divided into 2 parts: the NLTT Catalogue, which has 58,845 stars with $\mu > 0.18''$ yr^{-1} both in the northern and the southern hemispheres (Luyten, 1961; Luyten, 1980); and the Luyten Half-Second Catalogue (hereafter referred to as the LHS catalogue) – the main subject of this paper – which has the higher proper motion subset of 4470 stars with $\mu > 0.5''$ yr^{-1} (Luyten, 1979).

As explained in more detail later, the positional information of the stars in the LHS catalogue have generally large uncertainties, which can be as high as several arcminutes. However, the LHS catalogue is used as the basis for many different studies, including the luminosity functions of the halo population in the solar neighborhood (e.g. Dawson, 1986) and the nearby white dwarfs (e.g. Oswalt & Smith 1995). Many astronomical projects, particularly the ones that need follow-up observations, would greatly benefit from more accurate positions of the high-proper motion stars. So we undertook the task of deriving accurate positions and proper motions for these high proper motion stars using the Digitized Sky Survey I (DSS) I and DSS II images, which are the digitized versions of the first and second epoch Palomar Observatory Sky Survey (POSS) plates[6]. The results are presented in this paper.

The paper is arranged as follows: in §2 we describe the details of the LHS catalogue, in §3 we describe our procedure for determining more accurate positions and proper motions of these stars, in §4 we provide the details of the use of Tycho-2/Hipparcos catalogues for the brighter stars, in §5 we give the accuracy of our new catalogue and some overall statistics, and in §6 we outline some suggestions for future work. The actual catalogue is given in tabular form, an online version of which is available through the WWW at

[6]Based on photographic data obtained using The UK Schmidt Telescope. The UK Schmidt Telescope was operated by the Royal Observatory Edinburgh, with funding from the UK Science and Engineering Research Council, until 1988 June, and thereafter by the Anglo-Australian Observatory. The Digitized Sky Survey images were produced from these photographic data at the Space Telescope Science Institute under US Government grant NAG W-2166.

http://www.stsci.edu/∼ksahu/lhs. The electronic version of the paper and the online catalog contain information on all the 4470 stars in the LHS catalogue, with updated positions and proper-motions for 4040 stars, and only updated positions for 4340 stars. The printed version contains information on 528 sources which represent the high proper motion subset ($\mu > 1''$ yr^{-1}) of the LHS catalogue. The finding charts for these sources can be obtained using the Digitized Sky Survey server at STScI (http://archive.stsci.edu/cgi-bin/dss_form), by providing the coordinates appropriate for the epoch of the DSS observations.

2. Accuracy of LHS Coordinates and Magnitudes

Table 1 gives the details of the number of entries in various proper motion bins in the LHS catalogue. It is worth noting that out of the total of 4470 stars, 40 are common proper motion binaries.

Most of the HPM stars in the LHS and the NLTT catalogues were detected and catalogued through a massive effort by W. J. Luyten, which involved blinking the plates taken at two epochs, either by hand or by an automated machine (Luyten, 1979). This was done for 804 fields, and the remaining 160 low galactic latitude fields could not be processed because of high density of stars. As a result, the catalogue contains fewer stars in the low-galactic latitude fields than in the high-galactic latitude fields. Furthermore, the ESO plates (covering area south of -33° declination) were not available. So the density of HPM stars is smaller south of -33° (limit of the Palomar Survey) compared to the northern region.

The positions of a small fraction ($\sim 10\%$) of these HPM stars were measured from the meridian circle observations, for which 'absolute' positions are given in the LHS catalogue. For the remaining majority of the stars, only the 'relative' positions are given. As a result, although the LHS catalogue gives the positions of the stars to an accuracy of 1s (or $15''$) in RA and $0.1'$ in dec, the positional uncertainty is often larger. The uncertainty amounts to as much as several arcminutes in some cases, as discussed in the next section.

Apart from the positions and the proper motion information, the LHS catalogue also contains the estimated magnitudes. For a majority of the stars, both red (R) and blue (pg) magnitudes are given, as determined from the plates. In the LHS catalogue, the number of stars with no red magnitude is 7, and the number of stars with no blue magnitude is 163. The magnitude distribution of the stars is shown in Fig. 1 which shows that the catalogue has a limiting (red) magnitude of about 18. For reference, a straight-line fit to the points in the brighter bins is plotted, which indicates that the catalogue is affected by incompleteness beyond $m_R \sim 14$.

We would like to emphasize that the overall precision of the proper motions (the magnitude of the motion μ, as well as its position angle θ) in the LHS catalogue is generally good, only the positions have high uncertainties (more details in the following sections).

3. The Method of Manual Search

Manual inspection of several candidates using finder charts of the LHS Atlas (Luyten & Albers, 1979) revealed that the position errors can readily exceed 1 arcmin (see upper panel of Fig. 2). Such a large positional uncertainty makes it difficult to use an existing catalogue such as the Guide Star catalogue (GSC) to derive more accurate positions of the candidates through cross-correlation. Indeed, we first attempted to derive accurate coordinates through an automated approach, by correlating the positions of the LHS stars with the sources in the GSC after performing the appropriate coordinate-transformations to the epoch of the GSC observations. However, the number of matching pairs was small even with a search radius of $30''$, yielding accurate positions for only a small number of sources. If the search radius was made bigger, the chance of finding another random star in the field was high, and hence the cross-correlation technique was not reliable. The automated search was made even more difficult by numerous plate-flaws, dense stellar fields, possible minor planets, double stars, etc.

In order to reliably identify the HPM stars in an existing catalogue or image, it is not only necessary to make sure that the candidate lies within a specified search radius, but it is also important to confirm that the object has a high proper motion and has a similar brightness as specified in the original catalogue. The first and second epoch POSS plates are ideally suited for this purpose since (i) they cover the whole sky, (ii) the limiting magnitude of the plates makes *all* the LHS stars readily visible, and (iii) there are observations at two epochs so that the motion of the HPM stars can be readily identified by a comparison of the first and second epoch images. Furthermore, these digital scans were originally made at STScI and hence are locally available to the authors, which makes the task easier. An example is shown in Fig. 3 where the two panels show the DSS I and DSS II images of LHS 36. The size of each image is 10 $'$x 10 $'$, and the epochs of observations are 1953.28 and 1995.15 for of DSS I and DSS II, respectively. The HPM star is easily seen because of its motion between the two epochs. Since the source coordinates as determined from the DSS images are accurate to $\sim 1''$, the coordinates at two epochs can be used to derive more accurate positions and proper-motion data for these HPM stars.

To identify the candidates with the greatest certainty, we performed *manual* identification of all the 4470 stars using the DSS I and DSS II images and the finder charts of the

LHS Atlas (Luyten & Albers, 1979), with the help of our self-written, IRAF-based GLUYFIN, GLUYPOSSI scripts[7]. The procedure for the manual identification is briefly described below.

The DSS images for the two epochs were first retrieved through an automatic script. The sizes of the images were selected to be large enough so that the candidates would be in the field even with $\sim 1'$ initial errors in the coordinates and after undergoing the proper motions for ~ 40 years, but as small as possible in order to achieve good resolution which is required for precise astrometry. The size of the images for Luyten stars 1 to 100 ($\mu > 2''$ yr^{-1}) was $15' \times 15'$, the size of the images for stars 101-1000 ($2''$ yr$^{-1} > \mu > 1''$ yr^{-1}) was $5' \times 5'$, and the size of the images for stars 1001-6433 ($1''$ yr$^{-1} > \mu > 0.48''$ yr^{-1}) was $4' \times 4'$ (cf. Table 1).

DSS I charts were retrieved for *all* fields, but DSS II charts were not available for 644 coordinates out of the 4470 (marked with "P" in Table 2). Four DSS I and twenty-one DSS II images were of poor quality (edge of the plates), which were not usable at all (marked with "1" and "2", respectively).

If both DSS scans were available, and both scans had no major defects (3801 cases), then the procedure for determining the positions of the HPM star was as follows. The GLUYFIN script was used to display and blink the two frames, and the HPM star was conspicuous by its shift. Manual centering with a cursor and subsequent two dimensional Gaussian-profile fitting were performed for both frames, yielding precise pixel coordinates of the star for the two epochs. These pixel coordinates were transformed to astrometric positions using the STSDAS/GASP package, which uses the plate-constants stored in the header. (The resulting positions are in the GSC system, the details of which are given later.) Using the two positions determined for the two epochs, the proper motion of the star, its position angle and its extrapolated position for epoch 2000.0 were computed. These results are presented in Table 2.

Profile fitting *sometimes* failed or produced incorrect coordinates if the HPM star was saturated (477 cases - flagged as "s"), or if the star is merged with another star in one of the scans (246 cases – flagged as "m"). If the fitted position was obviously off the centroid, which was often caused by the diffraction spikes of a saturated star, the parameters were fine-tuned, and in extreme cases manual centering was performed (305 saturated and 64 merged stars were re-fitted – flagged as "c"). Double stars were looked up from the LHS catalogue, so as to correctly identify the components ("d").

Our proper motion determination (μ, θ) is sometimes uncertain, mostly because the

[7]All the scripts are available from the first author on request by e-mail

positional shift of the HPM star between the two epochs was not sufficient to determine the proper motion, or because the star was blended on one of the images (522 cases). In such a case, the star was flagged ("b"), and proper-motion data from Luyten was used to compute J2000.0 coordinates, still using our coordinates as initial values. Since the identification of the HPM star is secure, use of the DSS coordinates clearly provides a more accurate position of the star. The same procedure was adopted for all the HPM stars with smaller shift than $5''$ between the two DSS scans ("B").

If the identification from the DSS plate was uncertain, the identification was reconfirmed using the finding charts in the LHS Atlas (flagged as "i"). However, in some cases finding charts were not available in the LHS Atlas, though they would have been needed for secure identification (140 cases, marked as "W").

Finally, if the star was not found, the original coordinates and proper motion of Luyten are listed in Table 2 (flagged as "N").

If only one DSS image was available or had acceptable quality, stars were identified using the finder charts of the LHS Atlas. Astrometry was carried out on the single frame available using the GLUYPOSSI script, and coordinates for J2000.0 were computed from the proper motion given by Luyten. If the DSS II image was not available, the star was flagged as "P". It is worth noting that no Luyten stars with IDs greater than 6000 have finding charts since they were compiled from published data. In many cases, we could identify the star even without a finder, particularly when the initial coordinates were relatively good, and the star was bright and isolated.

4. Correlation with the Tycho-2 and Hipparcos Catalogues

The Tycho-2 catalogue is an astrometric reference catalogue containing positions and proper motions as well as two-color photometric data for the ~ 2.5 million brightest stars in the sky (Høg et al. 2000). Tycho-2 is based on observations of the ESA Hipparcos satellite, and supersedes the earlier Tycho-1 catalogue (Høg et al. 1997) both in the number of sources and in astrometric precision. The limiting magnitude ($V \sim 11.5$) of Tycho-2 allows cross-identification of only the bright LHS stars, which considerably improves the precision compared to the manual method, especially when the source is saturated in the DSS image. We cross-correlated our *refined* coordinates with the coordinates in the Tycho-2 catalogue (note that in few cases, e.g. when no DSS images were available, these were identical to the original LHS positions). Tests showed that the number of detections saturated at a critical distance of $8''$ between coordinates (which is used as one of the selection criteria).

Inspection of histograms of the magnitude differences both in the "blue" (Tycho B and Luyten photographic) and the "red" (Tycho V and Luyten red) bands showed that red magnitudes have a better correlation, which can be expressed as: $m_{Tyc,V} - m_{LHS,red} = 0.1^m \pm^{1.1}_{0.5}$ (median±maximum width of the distribution of the magnitude difference). Using the combined criteria of position and magnitude differences, 720 entries were refined and substituted by Tycho data (flagged as "T"). Double stars were handled manually, so as to avoid confusion. The Luyten photographic and red magnitudes were substituted by Tycho B and V magnitudes.

The Tycho-2 catalogue Supplement No. 1 lists stars that were published in the Tycho-1 or Hipparcos catalogues (Perryman et al. 1997), but not listed in Tycho-2. Some of these stars were excluded from Tycho-2 as they were too bright for proper treatment in the data reduction. We searched the Supplement catalogue by selecting candidates with proper motion and red magnitude measurements, i.e. only by selecting stars that were previously published in the Hipparcos catalogue, but not necessarily in Tycho-1. The same detection criteria as in the case of the Tycho-2 yielded 99 candidates.

5. The Revised Catalogue

5.1. Overall Statistics

Out of the 4470 HPM stars in the LHS catalogue, 3801 had both DSS I and DSS II images with acceptable quality. Through a manual search as explained above, a total of 4323 stars were identified reliably, 12 stars had uncertain identifications, and 135 stars were not found. New proper motion values were determined for 3894 stars. After *cross-correlation* with the Tycho-2 and Supplement (Hipparcos) catalogues, six additional stars were identified which were previously not found, two uncertain identifications were clarified and the coordinates and proper motions were improved for 819 stars (720 from Tycho-2, 99 from Supplement). The final number of entries with new (μ, θ) and coordinates are 4040 and 4330, respectively.

5.2. Astrometric Accuracy

In case of *manual identification*, the uncertainty in the final astrometric position of the HPM star is due to several factors: (i) the error in determining the center of the PSF at each epoch (ii) the positional error in the reference catalogue (iii) the error due to the (imperfect knowledge of the) geometric distortion of the plate, and (iv) the error in the determination of the magnitude and direction of the proper motion and the consequent error

in the extrapolation of the position to the epoch 2000.

The point-spread functions (PSFs) in the majority of the DSS images had FWHM of $\sim 7''$ (DSS I) and $\sim 4-5''$ (DSS II), while the plate scales are $1.68''$/pixel and $1''$/pixel, respectively. The error in our profile-fitting, except for the saturated and merged stars, was less than 0.2 pixel ($\sim 0.2''$), the typical error being about 0.05 pixel ($\sim 0.05''$). When the Gaussian fit failed, manual re-fitting could have an error of 1 pixel ($\sim 1''$).

The absolute astrometry at each epoch also depends on the accuracy of the plate-constants stored in the headers of the digital scans, and their systematic errors caused by the reference catalogues used. The northern hemisphere reference system is based on the AGK3 catalogue (Dritter Katalog der Astronomischen Gesellschaft), and southern hemisphere reference system is based on SAOC (Smithsonian Astrophysical Observatory Catalogue) in the region north of -65° and CPC (Cape Photometric Catalogue for 1950.0) in the far south, below -65°. The positional accuracy of the northern reference catalogue is, in general, 3 times better than the southern one ($0.6''$ vs. $1.7''$).

Positional errors caused by the geometric distortion from the plate center to the edge are in the range $0.5''$ to $1.1''$ in the northern celestial hemisphere, and $1.0''$ to $1.6''$ in the southern celestial hemisphere (Taff et al. 1990).

In order to determine the position of the HPM star for the epoch 2000.0, we need to extrapolate the position from the POSS epoch, using the derived magnitude and direction of its proper motion. This procedure accordingly increases the uncertainty in the final astrometric position.

We estimate that the combined effect of these uncertainties in the final astrometric position would be typically 2 arcsec, but can be $\sim 8''$ in a few cases. This is confirmed by Fig. 4, which shows that the difference between our coordinates and the Tycho coordinates peaks at $2''$, beyond which it drops rapidly and approaches zero beyond $5''$. We also tried to empirically estimate the final error by comparing the observed positions of a few HPM stars (as given in the GSC) with the derived positions using our method. We transformed the positions of several stars to the epoch of the appropriate Guide Star Catalogue (GSC) fields (which are based on Palomar Quick-V and the SERC-J survey), and compared them with the position of the GSC star. The positions were consistent within $\sim 5''$, as expected. We note that the uncertainty is dominated by the systematics explained above, and not by the accuracy in the determinations of the centroids of the stars at each epoch. So the uncertainties are not expected to be correlated with the magnitudes of the stars, which was further confirmed by making plots similar to Fig. 4 for stars in different magnitude bins.

The accuracy of the proper motions (μ and θ) is more difficult to estimate since they

clearly depend on the timespan between the two epochs of observations, the quality of the images, etc. But comparison of the proper motions with the Tycho-2 catalog gives a fair estimate, which is shown in Fig. 4. We estimate that for reliably identified sources, the accuracy in μ is generally $\pm 0.1'' yr^{-1}$, and the accuracy in θ is $\pm 5^{\circ}$. But such a comparison with the Tycho-2 catalog is valid only for the brighter stars. However, we note that the DSS goes much deeper than the magnitude limit of the LHS catalog, and the predominant uncertainty in the proper motions comes from the timespan between the two epochs rather than the brightness of the source. So the error is not likely to be larger than twice these values even for the fainter sources.

The accuracy is naturally much higher for brighter sources with *Tycho-2/Hipparcos* data. In these cases, the standard errors in the coordinates and the proper motions for all the stars are 60 mas and 2.5 mas yr^{-1}, respectively, but if $m_{Tyc,V} < 9.0^m$, the errors in the coordinates are less than 7 mas. Thus there is a large difference between the precisions of the Tycho-2 entries and the entries made with manual identification. In this sense, our catalogue in not homogeneous; but we have provided the best measurements that are currently available in all cases.

6. Summary and Suggestions for Future Work

We have revised the coordinates and proper motion data for the high proper motion (HPM) stars in the Luyten Half-Second (LHS) catalogue. The positional uncertainty in the original Luyten catalogue is typically $> 10''$ and is often $> 30''$. The uncertainties in the revised positions are typically $\sim 2''$, but can be as high as $\sim 8''$ in a few cases. The accuracy in μ is generally $\pm 0.1'' yr^{-1}$, and the accuracy in θ is $\pm 5^{\circ}$. Out of the 4470 candidates in the LHS catalogue, we have revised proper motion measurements and coordinates for 4040 stars and revised coordinates for 4330 stars. For most of the brighter sources ($m_R \lesssim 12$), the position and proper motion data have been replaced with the more accurate Tycho/Hipparcos data.

As described in §1, the LHS catalogue contains only a subset of the HPM stars currently available in the literature. It would be useful if the work presented here is extended to include the full set of the HPM stars, including those in the Luyten catalogue of HPM stars with $\mu > 0.2'' yr^{-1}$, for which the coordinates have large uncertainties. Indeed, now that the DSS I and the DSS II images are available for the whole sky, it should be possible to produce a complete catalogue of all the HPM stars in the entire sky including the Galactic plane region, down to stars with $\mu < 0.1'' yr^{-1}$. Fortunately, such a project has been undertaken by a group at STScI, and the product will be extremely useful for several projects. Such projects would

include, to name a few, (i) the prediction of future microlensing events of background stars by HPM stars, the observations of which can be used to derive accurate masses of the HPM stars (see, e.g., Salim and Gould 2001; Dominik and Sahu 2000; Paczyński 1998); (ii) cross-correlations with other catalogues to obtain data at other wavelengths; and (iii) determining the contributions of possible halo populations in the solar neighborhood (e.g. Schmidt 1975; Dawson 1986; Oppenheimer et al. 2001; Reid, Sahu and Hawley 2001).

Most of this work was done while GÁB was enjoying the hospitality of Space Telescope Science Institute (operated by NASA for AURA) as a summer student. P. Németh and GÁB would like to thank G. Fűrész for providing computer facilities to the project. This project was supported by the DDRF grant of STScI. We thank the anonymous referee for useful suggestions.

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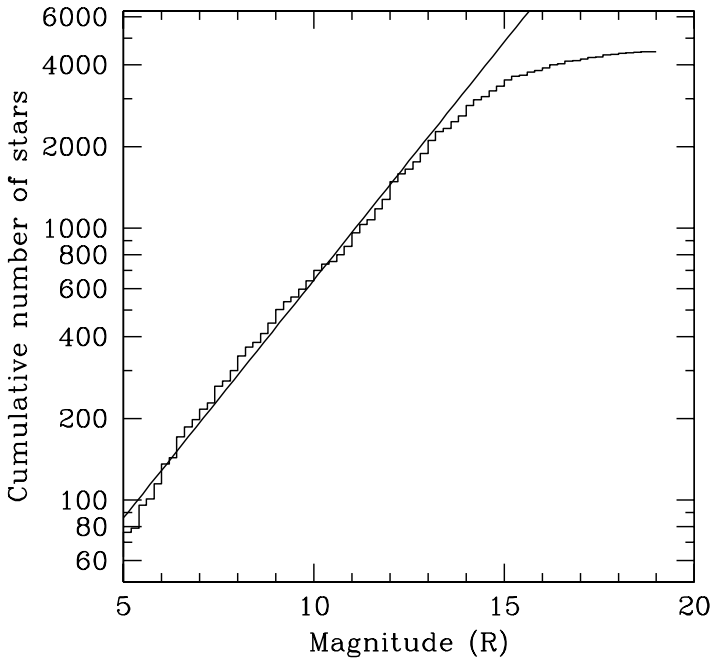

Fig. 1.— The figure shows the cumulative number distribution of stars as a function of magnitude. This shows that the LHS catalogue has a limiting (red) magnitude of about 18. A straight line is shown for reference which indicates that the catalogue is affected by incompleteness beyond $m_R \sim 14$.

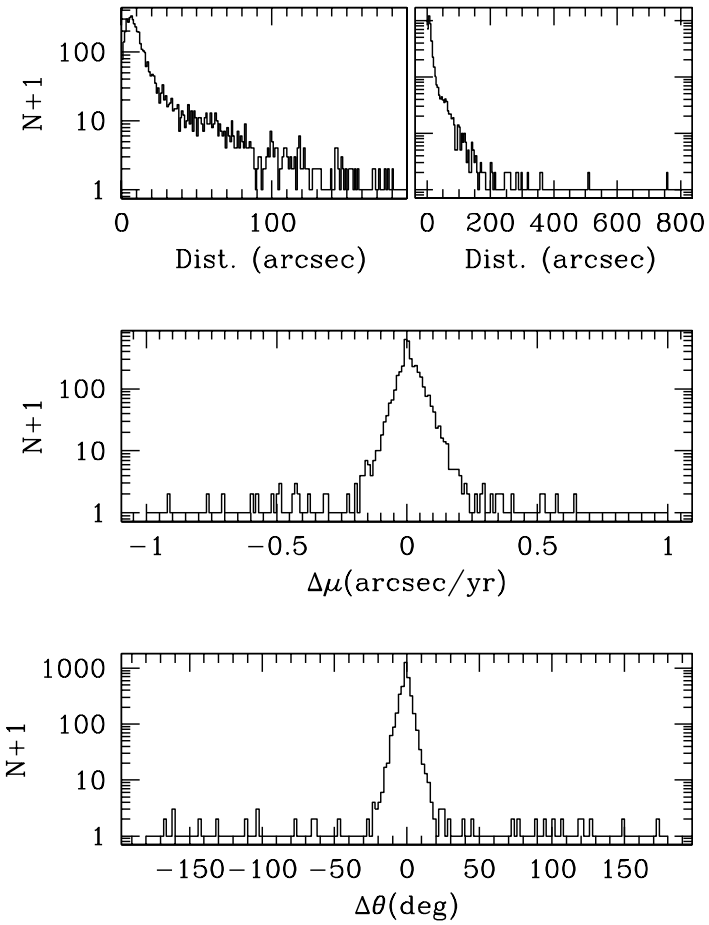

Fig. 2.— The upper panel shows a histogram of the distance between our positions (either result of the manual method or cross-correlation with the Tycho catalogue) and the positions in the LHS catalogue, both for epoch and equinox 2000.0. The upper left panel uses $1''$ bins, while the upper right panel employs $4''$ bins. Only those stars were included, which were identified by the manual search or cross-correlation with the Tycho catalogue. Note the long tail of the distribution. The mid-panel shows the difference between Luyten's and our proper motion in 200 equally spaced bins with $0.01''$ binwidth. The lower panel displays the angle between the star's motion determined by Luyten and by the present work (180 bins of $2°$ width). The lower two panels are shown only for stars not flagged as "B" or "b" in Table 2, i.e. when we have new μ and θ measurements.

(These figures can be obtained from http://www.stsci.edu/∼ksahu/lhs)

Fig. 3.— An example of the DSS I (left) and DSS II (right) images used for determining the coordinates and the proper motions. The images shown here correspond to LHS 36, and the size of each image is $10' \times 10'$. The epochs of observations are 1953.28 and 1995.15 for DSS I and DSS II, respectively. The HPM star is easily seen because of its motion during the two epochs. North is up, and east is to the left.

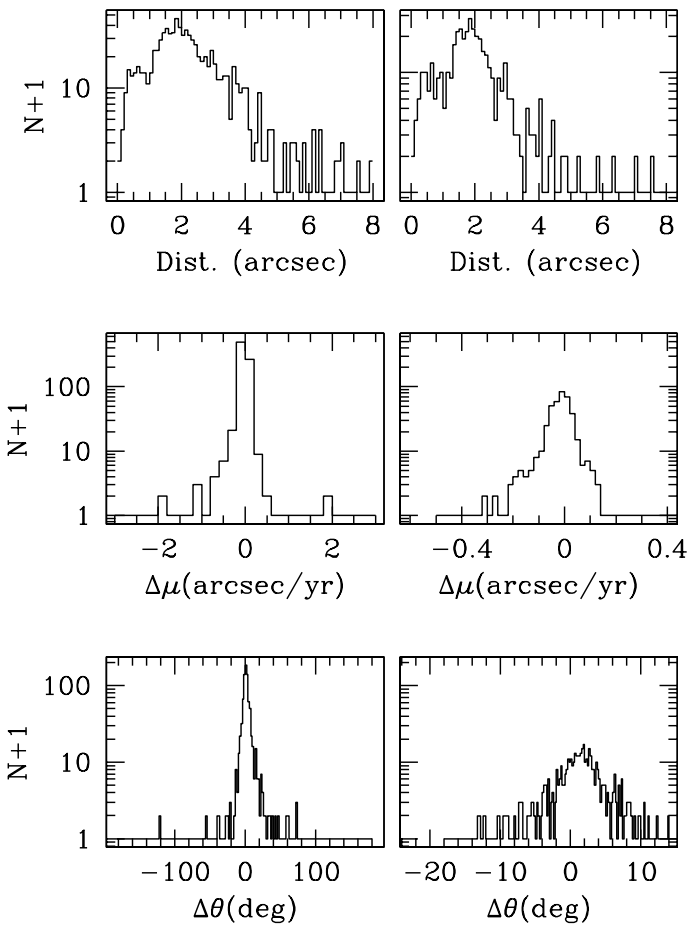

Fig. 4.— The upper left panel shows a histogram of the distance between the position as determined from the manual identification and that of the Tycho catalogue for all the stars which were found both in the Tycho catalogue and in the manual search (805 entries). The width of the bins is $0.1''$. The upper right panel is almost the same, but here the stars with "B,b,s,i,m,c" flags in Table 2, i.e. those with inaccurate proper motion measurements, saturated profiles, etc., are not included. The two histograms are very similar, which shows that the uncertainty in the proper motion (and the consequent uncertainty in the extrapolation to epoch 2000.0) is only a second order effect compared to the original positional errors. The middle panel shows the difference between the proper motions as determined from the manual identification and that of the Tycho catalogue. The middle left panel is for all stars (found both in the Tycho catalogue and in the manual search), using $0.2''/yr$ binwidth. This shows that saturation of the star or inadequate timespan between the two observations can yield very inaccurate proper motion measurements. The middle right panel shows the same ($0.02''/yr$ binwidth, 384 stars), but after filtering all saturated and merged stars, and those with inaccurate proper motion estimates ("B,b,s,i,m,c" flags). In these cases, our manual method has high accuracy. The lower left panel displays the angle between the star's motion in the Tycho catalogue and that of the manual method (180 bins of 2° width). The lower right panel is the same but after filtering as in the previous panels. Again, this shows that the accuracy in θ is high if the star is not affected by saturation or merging.

Table 1: Stars in the LHS catalogue

Location in catalogue	Proper motion (μ) ($''/yr$)	No. of stars	% of total
Main body, 1-100	>2	73	1.6
Main body, 101-1000	$1-2$	455	10.2
Main body, 1001-5000	$0.5-1$	3073	69
Appendix I, 5001-6000	$0.48-0.499$	441	9.4
Appendix II, >6001	$>0.49^*$	428	9.8
All		4470	

*stars for which at one time or another a value of $\mu > 0.49$ $''$ yr^{-1} was published

Table 2. Revised Positions and Proper Motions for LHS stars

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
1	00	05	24.43	-37	21	26.5	6.11	112.54	5.7	Ts	00	05	24	-37	21	24	6.108	112.5	1977.70569	1996.71313	8.8	10.4	6995-01264-1
2	00	06	43.40	-07	32	19.4	2.13	197.02	9.5		00	06	43	-07	32	12	2.041	203.6	1983.74939	1989.89038	13.0	15.5	——
3	00	18	22.89	44	01	22.6	2.92	81.94	1.8	Tdms	00	18	23	44	01	24	2.899	82.2	1954.75684	1989.76233	8.3	10.1	2794-00157-1
4	00	18	25.79	44	01	38.2	2.93	81.28	4.5	cs	00	18	26	44	01	42	2.899	82.2	1954.75684	1989.76233	10.3	12.6	——
5	00	20	4.07	-64	52	39.6	1.65	76.17	15.6	bs	00	20	4	-64	52	24	2.063	55.9	1977.86694	1993.63562	4.3	4.8	——
6	00	25	49.47	-77	15	23.8	2.97	93.98	15.9	bs	00	25	45	-77	15	18	2.250	81.7	1977.76855	1987.70410	2.8	3.5	——
7	00	49	09.90	05	23	19.0	2.98	155.54	5.2	H	00	49	10	05	23	24	2.980	155.7	1953.83081	1994.60938	12.6	—	3829
8	01	08	16.36	54	55	13.1	3.77	115.12	3.3	Ts	01	08	16	54	55	12	3.762	114.9	1954.00842	1990.79260	5.2	6.0	3673-01929-1
9	01	39	2.00	-17	57	0.0	3.37	80.40	—	NP	01	39	2	-17	57	0	3.368	80.4	1978.68945	——	12.2	14.1	——
10	01	39	2.00	-17	57	0.0	3.37	80.40	—	NP	01	39	2	-17	57	0	3.368	80.4	1978.68945	——	12.7	14.6	——
11	02	00	13.05	13	03	5.3	2.13	148.07	44.6		02	00	10	13	03	6	2.097	147.8	1950.61768	1990.88000	12.5	14.2	——
12	02	02	52.14	05	42	20.5	2.43	107.07	3.2	TP	02	02	52	05	42	18	2.432	106.3	1954.89648	——	12.4	13.6	0043-00072-1
13	02	10	25.98	-50	49	25.2	2.25	72.62	4.8	Tbs	02	10	26	-50	49	30	2.206	73.1	1975.85071	1988.90979	6.2	7.1	8048-01022-1
14	02	12	21.00	03	34	24.0	2.60	223.50	—	NP	02	12	21	03	34	24	2.598	223.5	1953.77356	——	9.6	11.3	——
15	02	36	4.81	06	53	15.0	2.32	51.40	4.1	PW	02	36	5	06	53	12	2.322	51.4	1954.97302	——	5.8	7.0	——
16	02	36	15.28	06	52	18.9	2.32	51.40	4.3	PW	02	36	15	06	52	18	2.322	51.4	1954.97302	——	11.3	13.1	——
17	02	46	15.00	-04	59	18.0	2.52	138.10	—	NP	02	46	15	-04	59	18	2.524	138.1	1982.78809	——	14.8	16.7	——
18	03	10	58.57	73	46	18.9	2.13	120.67	2.0		03	10	59	73	46	18	2.104	120.0	1953.78467	1994.77905	15.1	16.3	——
19	03	19	55.65	-43	04	11.2	3.12	76.52	3.9	Ts	03	19	56	-43	04	12	3.147	76.5	1977.78247	1994.99451	4.3	5.1	7567-01183-1
20	03	38	15.58	-11	29	13.1	3.03	152.10	251.4	P	03	38	28	-11	32	6	3.033	152.1	1982.79346	——	11.9	13.3	——
21	04	03	15.00	35	16	23.9	2.20	128.06	0.1	Tcs	04	03	15	35	16	24	2.204	128.0	1954.97058	1993.70789	8.6	9.6	2366-03215-1
22	04	10	27.29	-53	36	10.2	3.77	223.29	11.6	cm	04	10	26	-53	36	12	2.521	198.1	1978.77441	1994.98901	13.5	15.0	——
23	04	15	17.23	-07	39	36.1	5.54	194.40	30.2	bdms	04	15	16	-07	39	12	4.079	213.3	1982.81555	1985.95337	4.4	5.3	——
24	04	15	16.92	-07	39	54.7	8.06	235.28	65.5	bdms	04	15	21	-07	39	30	4.079	213.3	1982.81555	1985.95337	9.7	9.7	——
25	04	15	18.51	-07	39	6.6	3.11	183.27	43.8	bdms	04	15	21	-07	39	30	4.079	213.3	1982.81555	1985.95337	10.6	12.3	——
26	04	31	11.85	58	58	37.8	2.44	146.69	14.4	dm	04	31	10	58	58	36	2.383	144.8	1953.11267	1992.76624	11.2	12.9	——
27	04	31	11.85	58	58	37.8	2.44	146.69	6.8	dm	04	31	11	58	58	36	2.383	144.8	1953.11267	1992.76624	13.0	12.8	——
28	05	03	23.89	53	07	42.5	2.02	139.70	1.1	T	05	03	24	53	07	42	2.008	140.5	1954.97339	1989.89941	10.1	11.7	3734-00270-1
29	05	11	40.61	-45	01	6.7	8.73	131.42	4.2	T	05	11	41	-45	01	6	8.688	131.3	1975.90845	1990.06848	9.0	10.8	8078-01749-1
30	05	31	26.96	-03	40	45.7	2.62	170.65	3.7	bs	05	31	27	-03	40	42	2.235	160.2	1984.89795	1990.97266	8.3	9.8	——
31	05	42	09.28	12	29	21.6	2.55	128.16	758.4	T	05	42	9	12	42	0	2.571	128.4	1951.84497	1991.85864	11.5	13.1	0722-00455-1
32	05	55	9.58	-04	10	9.7	2.57	167.12	7.3	bm	05	55	10	-04	10	6	2.377	166.6	1983.99341	1989.02197	14.5	15.4	——
33	07	27	24.50	05	13	32.9	3.74	171.17	8.0	Tm	07	27	24	05	13	30	3.761	171.2	1954.17578	1991.10193	10.0	11.8	0173-03208-1
34	07	53	8.38	-67	47	32.2	2.15	135.87	31.9		07	53	14	-67	47	30	2.041	135.6	1978.10278	1996.13110	14.4	15.0	——
35	08	11	57.67	08	46	22.2	5.24	167.89	6.5	m	08	11	58	08	46	18	5.211	167.1	1951.23621	1988.94360	12.7	14.3	——
36	10	56	28.99	07	00	52.0	4.71	234.65	9.9		10	56	29	07	00	42	4.696	234.6	1953.28552	1995.15417	13.5	15.6	——
37	11	03	20.19	35	58	11.6	4.80	186.91	2.4	Ts	11	03	20	35	58	12	4.778	186.8	1953.34583	1992.09399	7.7	9.4	2521-02279-1
38	11	05	28.57	43	31	36.4	4.52	282.05	6.2	TPWd	11	05	28	43	31	36	4.531	281.9	1955.21179	——	8.9	10.7	3012-02528-1
39	11	05	30.31	43	31	16.6	4.53	281.90	3.6	PWd	11	05	30	43	31	18	4.531	281.9	1955.21179	——	14.0	16.0	——
40	11	16	0.26	-57	32	54.4	2.64	291.85	6.0	bm	11	16	1	-57	32	54	2.733	294.9	1987.08142	1992.23499	11.3	12.8	——
41	11	20	04.83	65	50	47.4	2.96	273.61	5.5	Ts	11	20	5	65	50	42	2.950	273.0	1954.11084	1997.10498	9.5	11.1	4152-00272-1
42	11	40	20.06	67	15	32.4	3.17	175.25	25.0	H	11	40	16	67	15	24	3.209	175.2	1954.11084	1996.96863	12.3	—	56936
43	11	45	42.91	-64	50	29.0	2.64	96.83	5.1	b	11	45	43	-64	50	24	2.667	97.2	1987.26160	1996.29785	11.5	11.3	——
44	11	52	59.25	37	43	5.4	7.24	143.26	3.0	s	11	52	59	37	43	6	7.042	145.5	1950.36768	1989.04236	6.4	7.3	——
45	12	24	52.51	-18	14	32.2	2.55	154.56	7.3	T	12	24	53	-18	14	30	2.532	154.7	1979.45312	1994.34790	11.4	12.5	6105-01620-1
46	13	36	32.00	03	40	44.6	3.88	252.78	3.4		13	36	32	03	40	48	3.870	253.6	1950.29956	1993.35950	14.8	15.6	——
47	13	45	43.78	14	53	29.5	2.30	129.30	6.3	Ts	13	45	44	14	53	24	2.298	129.3	1954.24756	1994.35681	8.6	10.2	0899-00789-1
48	14	15	39.71	19	10	56.7	2.28	208.67	4.9	HN12	14	15	40	19	10	54	2.284	208.4	1950.29407	1996.38879	0.2	—	69673A
49	14	29	43.28	-62	40	46.4	3.81	281.70	2.5	P	14	29	43	-62	40	48	3.809	281.7	1976.19324	——	11.4	13.0	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
50	14	39	36.00	-60	51	6.0	3.66	280.90	—	NPW	14	39	36	-60	51	6	3.664	280.9	1976.19324	——	0.2	0.8	——
51	14	39	36.00	-60	51	6.0	3.66	280.90	—	NP	14	39	36	-60	51	6	3.664	280.9	1976.19324	——	1.6	2.9	——
52	15	10	13.40	-16	27	55.7	4.09	188.36	14.9	c	15	10	13	-16	27	42	3.681	195.9	1982.52441	1987.41638	9.8	10.7	——
53	15	10	13.08	-16	22	52.0	3.95	193.99	10.1	bcs	15	10	13	-16	22	42	3.681	195.9	1982.52441	1987.41638	9.3	9.9	——
54	15	42	06.59	-19	28	18.4	2.28	242.91	8.4	H	15	42	6	-19	28	18	2.254	243.2	1976.40857	1991.60828	11.9	—	76901
55	16	14	32.78	19	06	9.7	1.97	280.10	61.9		16	14	37	19	05	54	2.033	280.0	1950.29443	1987.30518	12.2	14.6	——
56	17	49	50.05	82	46	25.2	3.59	336.55	20.9		17	49	39	82	46	24	3.587	337.3	1953.60864	1996.59619	14.7	15.3	——
57	17	57	48.50	04	41	35.8	10.31	355.56	14.3	T	17	57	49	04	41	48	10.310	355.8	1950.52136	1991.45837	9.8	11.7	0425-02502-1
58	18	42	46.90	59	37	47.1	2.21	322.45	127.1	dms	18	42	46	59	39	54	2.273	323.3	1952.40247	1991.66345	8.7	10.4	——
59	18	42	47.17	59	37	35.8	2.28	324.26	120.2	dms	18	42	47	59	39	36	2.273	323.3	1952.40247	1991.66345	9.5	11.3	——
60	19	20	48.20	-45	33	32.3	3.11	165.25	44.9		19	20	44	-45	33	24	2.945	167.3	1978.57947	1993.31775	12.1	13.7	——
61	21	04	53.38	-16	57	31.9	2.23	204.21	11.5	TBb	21	04	53	-16	57	42	2.251	206.3	1983.76819	1984.58472	11.9	13.9	6350-01504-1
62	21	06	53.48	38	45	1.6	5.12	49.57	6.2	dms	21	06	54	38	45	0	5.204	52.2	1951.51892	1991.52161	4.9	6.2	——
63	21	06	55.27	38	44	31.3	5.17	52.77	3.4	Tdms	21	06	55	38	44	30	5.204	52.2	1951.51892	1991.52161	6.1	7.6	3168-02798-1
64	21	07	55.58	59	43	18.1	2.11	208.56	4.4		21	07	55	59	43	18	2.098	208.7	1952.55835	1991.67188	14.3	15.8	——
65	21	09	17.43	-13	18	9.0	2.12	160.25	213.2	TBb	21	09	18	-13	14	36	2.096	160.1	1983.76819	1984.58472	11.1	12.3	5783-01513-1
66	21	17	15.52	-38	52	9.4	3.43	250.31	6.9	s	21	17	15	-38	52	6	3.453	250.5	1977.69446	1991.75891	6.4	7.9	——
67	22	03	22.62	-56	47	8.2	4.86	113.98	5.5	s	22	03	22	-56	47	6	4.695	122.7	1978.79736	1993.69043	4.6	5.9	——
68	22	38	33.80	-15	18	2.9	3.24	50.12	57.0		22	38	34	-15	17	6	3.254	46.6	1982.63733	1991.53967	12.8	14.4	——
69	22	53	53.42	-06	46	56.3	2.65	107.52	21.2	b	22	53	52	-06	46	54	2.570	106.0	1982.79565	1991.67944	15.0	16.8	——
70	23	05	52.42	-35	51	11.4	7.20	77.20	5.1	s	23	05	52	-35	51	12	6.907	78.9	1980.76099	1996.75684	7.3	8.9	——
71	23	13	16.98	57	10	6.1	2.10	81.90	0.2	Ts	23	13	17	57	10	6	2.095	81.7	1952.70837	1990.78955	5.7	6.9	4006-01866-1
72	23	43	13.64	-24	09	51.0	2.53	147.83	5.8		23	43	14	-24	09	54	2.557	150.1	1982.63464	1996.68579	11.7	13.2	——
73	23	43	16.64	-24	11	16.4	2.53	148.40	5.1	c	23	43	17	-24	11	18	2.557	150.1	1982.63464	1996.68579	12.0	13.5	——
101	00	02	10.19	27	04	55.5	1.29	140.01	3.0	Tcs	00	02	10	27	04	54	1.295	139.8	1950.61218	1991.77600	5.8	6.6	1732-02731-1
102	00	04	36.43	-40	44	3.1	1.66	154.42	117.3		00	04	41	-40	42	18	1.618	154.5	1977.70569	1996.71313	13.0	14.5	——
103	00	07	26.84	29	14	31.1	1.94	127.41	11.1		00	07	26	29	14	30	1.890	127.2	1954.83057	1989.82507	13.3	15.2	——
104	00	09	16.60	09	00	40.3	1.21	185.09	6.2		00	09	17	09	00	42	1.108	187.8	1955.86072	1991.69678	12.9	14.4	——
105	00	09	17.31	-19	42	31.4	1.15	59.50	59.4	P	00	09	18	-19	43	30	1.148	59.5	1977.84229	——	14.2	15.8	——
106	00	14	7.62	-20	22	56.5	1.28	262.80	175.4	P	00	14	20	-20	23	18	1.277	262.8	1977.76318	——	17.9	21.0	——
107	00	16	14.61	19	51	37.6	1.04	136.24	7.0	Hdm	00	16	15	19	51	42	1.037	137.5	1954.67493	1990.63391	11.9	—	1295
108	00	16	16.25	19	51	49.1	1.08	136.25	6.0	d	00	16	16	19	51	54	1.037	137.5	1954.67493	1990.63391	12.1	14.1	——
109	00	17	40.00	-10	46	18.0	1.05	180.80	—	NP	00	17	40	-10	46	18	1.055	180.8	1983.76855	——	13.3	14.7	——
110	00	19	36.69	-28	09	40.3	1.40	190.64	26.0	dm	00	19	37	-28	10	6	1.373	191.3	1976.88098	1991.67395	13.8	15.3	——
111	00	19	37.16	-28	09	48.0	1.50	186.02	24.1	dm	00	19	37	-28	10	12	1.373	191.3	1976.88098	1991.67395	13.3	14.8	——
112	00	20	29.50	33	05	5.5	1.37	128.85	18.9		00	20	28	33	05	6	1.362	129.2	1954.75696	1989.67212	15.2	17.2	——
113	00	31	35.32	-05	52	13.7	1.10	163.10	6.4	P	00	31	35	-05	52	18	1.098	163.1	1983.53088	——	12.2	13.8	——
114	00	32	29.46	67	14	8.1	1.76	98.07	21.7	Td	00	32	26	67	14	0	1.748	97.8	1952.63232	1991.71057	10.6	12.2	4027-00803-1
115	00	32	30.17	67	14	5.9	1.83	99.69	24.9	dim	00	32	26	67	14	0	1.748	97.8	1952.63232	1991.71057	12.0	13.9	——
116	00	35	3.06	-63	41	44.8	1.10	121.60	15.8	Ps	00	35	5	-63	41	54	1.104	121.6	1977.78235	——	9.2	10.1	——
117	00	35	55.60	10	28	33.8	1.19	111.48	9.6		00	35	55	10	28	30	1.186	110.5	1953.70789	1990.78430	14.3	16.1	——
118	00	37	20.70	-24	46	2.2	1.39	90.54	10.2	Tbcs	00	37	20	-24	46	6	1.369	90.4	1980.63025	1989.73975	5.7	6.6	6421-01924-1
119	00	38	59.04	30	36	58.4	1.56	88.83	4.5	T	00	38	59	30	36	54	1.561	88.3	1954.75696	1990.81433	11.4	12.7	2275-00678-1
120	00	43	35.74	28	26	39.5	1.13	183.20	4.2		00	43	36	28	26	42	1.062	187.0	1954.75696	1990.81433	13.7	15.5	——
121	00	48	22.98	05	16	50.3	1.36	146.30	2.3	Ts	00	48	23	05	16	48	1.367	146.7	1953.83081	1994.60938	5.8	6.9	0017-01398-1
122	00	49	6.51	57	48	54.9	1.36	115.10	6.5	cdims	00	49	6	57	49	0	1.219	115.6	1952.70850	1991.68323	7.3	8.7	——
123	00	49	6.25	57	48	56.3	1.27	114.96	6.4	cdms	00	49	7	57	48	54	1.219	115.6	1952.70850	1991.68323	3.4	3.9	——
124	00	49	28.87	-61	02	33.6	1.04	96.61	73.8		00	49	34	-61	01	30	1.119	94.0	1975.69214	1990.78076	12.1	13.6	——
125	00	50	17.27	-39	30	11.0	1.16	162.97	5.9		00	50	17	-39	30	6	1.025	165.6	1976.89185	1990.72876	13.7	—	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
126	00	51	29.84	58	18	7.3	1.62	75.65	6.7	T	00	51	29	58	18	6	1.549	75.9	1952.70850	1991.68323	10.8	12.4	3667-01078-1
127	00	55	43.84	-21	13	5.5	1.23	98.30	35.4	P	00	55	46	-21	13	24	1.227	98.3	1977.63745	——	15.2	16.6	——
128	00	57	19.76	-62	14	47.0	1.03	91.59	25.1	s	00	57	23	-62	14	36	1.076	81.3	1977.78235	1990.78076	10.4	11.7	——
129	00	58	27.83	-27	51	25.3	1.33	103.01	2.6	H	00	58	28	-27	51	24	1.305	102.7	1978.81494	1988.75415	11.8	—	4569
130	01	00	56.41	-04	26	57.0	1.40	70.60	9.3		01	00	57	-04	27	0	1.326	70.5	1982.88354	1995.79724	12.8	14.1	——
131	01	02	32.24	71	40	47.3	1.79	102.33	12.5	T	01	02	30	71	40	54	1.783	101.2	1954.72705	1995.58740	10.2	11.9	4304-00700-1
132	01	02	51.19	-37	37	45.4	1.58	82.18	3.4		01	02	51	-37	37	48	1.519	80.3	1976.89185	1990.72876	18.1	—	——
133	01	03	38.84	-45	47	31.5	1.75	189.53	9.9	TP	01	03	38	-45	47	36	1.713	187.6	1979.70581	——	12.0	13.3	8032-01230-1
134	01	04	53.64	-18	07	29.4	1.34	71.50	7.4	P	01	04	54	-18	07	24	1.342	71.5	1977.63745	——	13.3	15.0	——
135	01	05	37.76	28	29	32.7	1.97	96.43	4.5		01	05	38	28	29	36	1.906	95.0	1952.71118	1989.82251	14.0	16.0	——
136	01	07	08.20	63	56	28.8	1.58	78.38	14.6	Tcs	01	07	6	63	56	30	1.556	76.5	1954.74890	1991.71057	9.2	10.7	4025-00626-1
137	01	07	47.95	34	12	29.8	1.46	72.27	0.7		01	07	48	34	12	30	1.464	69.9	1951.83899	1991.75708	12.9	14.6	——
138	01	12	30.61	-16	59	56.3	1.37	61.87	9.5	Hb	01	12	30	-17	00	0	1.345	62.3	1983.69763	1991.67676	12.0	—	5643
139	01	16	29.31	24	19	25.9	1.85	112.36	9.6		01	16	30	24	19	24	1.841	112.2	1954.74072	1990.81165	14.2	15.7	——
140	01	19	52.27	84	09	33.2	1.12	296.68	3.4		01	19	51	84	09	36	1.081	295.1	1952.64050	1996.77417	14.7	16.2	——
141	01	21	34.59	-41	39	23.1	1.32	110.23	4.7	TPWi	01	21	35	-41	39	24	1.345	109.4	1977.63208	——	10.3	11.8	7544-00512-1
142	01	32	26.20	-21	54	18.5	1.07	213.61	99.7	TP	01	32	30	-21	52	54	1.062	210.7	1980.78296	——	11.2	13.3	5854-02050-1
144	01	38	49.15	11	21	35.1	1.69	145.28	12.5		01	38	50	11	21	36	1.623	144.9	1949.88818	1988.63232	15.4	17.0	——
145	01	43	1.18	-67	18	34.7	1.24	193.54	39.3		01	42	58	-67	18	0	1.048	197.8	1976.66858	1993.84656	13.6	14.7	——
146	01	43	4.00	-15	56	6.0	1.92	296.80	—	NP	01	43	4	-15	56	6	1.922	296.8	1982.73047	——	3.4	4.5	——
147	01	48	7.65	-17	11	20.3	1.19	187.60	60.9	P	01	48	9	-17	12	18	1.186	187.6	1982.73047	——	17.7	18.1	——
148	01	53	8.99	-33	25	2.3	1.11	81.36	12.9		01	53	10	-33	25	0	1.119	84.4	1978.88623	1996.61743	15.7	—	——
149	02	05	04.84	-17	36	52.6	1.32	97.43	5.2	T	02	05	5	-17	36	48	1.299	96.8	1977.93274	1991.90955	10.4	12.1	5856-02250-1
150	02	07	23.42	-66	34	16.1	1.79	85.35	32.4		02	07	18	-66	34	18	1.798	77.7	1978.81787	1989.72876	12.0	13.5	——
151	02	11	21.01	39	55	20.7	1.19	116.08	12.1		02	11	20	39	55	24	1.144	115.7	1953.99768	1987.80078	14.5	14.5	——
152	02	13	50.09	15	59	9.8	1.08	108.34	8.3		02	13	50	15	59	18	1.020	104.1	1954.68066	1990.78455	12.9	14.0	——
153	02	16	57.46	42	58	3.2	1.01	125.20	6.8	2	02	16	58	42	58	0	1.009	125.2	1953.99768	1989.67505	16.3	16.3	——
154	02	17	03.23	34	13	27.2	1.18	101.99	10.1	Ts	02	17	4	34	13	24	1.180	101.9	1951.83911	1986.90747	4.9	5.6	2318-01874-1
154a	02	19	10.06	-36	46	41.3	1.50	68.50	14.4	P	02	19	9	-36	46	48	1.497	68.5	1979.64307	——	11.3	13.2	——
155	02	31	27.74	57	22	41.9	1.13	89.39	15.3		02	31	26	57	22	48	1.042	88.5	1957.96753	1989.95923	13.4	15.0	——
156	02	34	12.58	17	45	48.8	1.23	144.82	8.3		02	34	12	17	45	48	1.193	145.0	1951.91553	1990.85828	13.4	15.0	——
157	02	39	50.73	-34	08	0.5	1.82	162.02	6.4		02	39	51	-34	08	6	1.721	161.7	1979.87549	1993.80273	12.0	13.5	——
158	02	42	2.92	-44	31	0.8	1.07	92.04	1.1		02	42	3	-44	31	0	1.095	89.1	1975.90552	1990.72327	12.0	13.5	——
159	02	52	07.14	34	23	21.6	1.41	134.83	2.9	Ts	02	52	7	34	23	24	1.342	136.1	1954.97314	1988.71411	9.7	11.2	2334-00540-1
160	02	52	22.01	-63	40	49.0	1.15	58.40	59.3	P	02	52	18	-63	41	42	1.149	58.4	1977.77979	——	11.0	12.4	——
161	02	52	45.65	01	55	49.4	1.55	110.70	21.6		02	52	47	01	55	42	1.455	110.0	1955.80908	1989.97021	14.1	15.8	——
162	02	56	13.40	-35	08	29.1	1.14	136.58	7.1		02	56	13	-35	08	24	1.011	138.8	1979.87549	1993.80273	15.1	—	——
163	02	57	31.14	10	47	23.8	1.84	103.95	6.5		02	57	31	10	47	30	1.821	102.9	1949.88843	1990.81189	12.0	13.6	——
164	03	01	40.83	-34	57	58.6	1.40	153.98	5.0		03	01	41	-34	57	54	1.320	158.9	1979.87549	1993.80273	13.2	—	——
165	03	06	28.63	-07	40	40.6	1.51	125.20	9.5	P	03	06	28	-07	40	42	1.511	125.2	1983.97925	——	13.7	14.8	——
166	03	09	04.02	49	36	47.8	1.27	94.14	11.2	Ts	03	09	5	49	36	42	1.269	94.0	1953.76831	1989.76257	4.1	4.8	3318-01840-1
167	03	12	29.53	-38	05	49.7	1.43	59.70	40.7	PWi	03	12	30	-38	06	30	1.434	59.7	1977.63770	——	10.4	12.0	——
168	03	13	22.98	04	46	27.7	1.76	88.71	17.6		03	13	22	04	46	18	1.706	86.4	1955.87476	1990.74084	12.9	14.8	——
169	03	13	24.39	18	49	36.0	1.74	129.34	5.5		03	13	24	18	49	36	1.654	131.1	1955.81470	1986.74622	12.8	14.8	——
170	03	16	26.91	38	05	56.4	1.29	144.01	11.0		03	16	26	38	05	54	1.286	146.0	1955.11816	1989.74622	10.2	11.6	——
171	03	17	46.62	-62	34	38.8	1.34	77.24	15.4	dm	03	17	46	-62	34	24	1.482	64.1	1977.77979	1989.89038	5.4	6.0	——
172	03	18	14.06	-62	30	22.8	1.85	68.99	7.4	dm	03	18	13	-62	30	24	1.482	64.1	1977.77979	1989.89038	5.0	5.6	——
173	03	28	52.97	37	22	56.8	1.55	133.57	12.7	H	03	28	54	37	23	0	1.550	133.3	1955.11816	1988.71704	11.2	—	16209
174	03	30	44.93	34	01	5.4	1.65	161.16	14.8		03	30	46	34	01	12	1.560	161.6	1955.11816	1988.71704	12.2	13.6	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
175	03	31	17.40	66	43	49.0	1.60	131.79	27.0	T	03	31	13	66	43	42	1.591	132.8	1954.08252	1991.76831	9.9	10.7	4074-01384-1
176	03	35	38.53	-08	29	22.1	1.58	102.40	52.5	P	03	35	35	-08	29	18	1.582	102.4	1982.79346	———	14.9	16.8	———
177	03	35	52.16	41	42	17.4	1.06	83.33	6.9		03	35	52	41	42	24	1.012	83.5	1953.02490	1989.74353	12.2	13.9	———
178	03	42	29.55	12	31	33.3	1.62	151.33	8.5		03	42	29	12	31	36	1.572	151.5	1954.00598	1988.94312	12.2	14.2	———
179	03	44	34.98	18	26	8.3	1.24	158.40	14.1		03	44	34	18	26	6	1.204	159.4	1951.91577	1991.78198	15.0	15.2	———
180	03	47	02.11	41	25	38.1	1.38	154.47	20.1	Tcdms	03	47	2	41	25	18	1.370	154.6	1953.02490	1989.75720	8.2	9.1	2871-00392-2
181	03	47	2.88	41	25	39.1	1.46	152.95	18.0	cdms	03	47	2	41	25	24	1.370	154.6	1953.02490	1989.75720	9.1	10.4	———
182	03	50	13.98	43	25	39.3	1.46	164.53	13.8		03	50	13	43	25	48	1.439	161.0	1953.02490	1989.75171	13.6	15.3	———
183	03	50	44.45	-06	05	45.3	1.60	190.10	11.5	b	03	50	44	-06	05	36	1.428	196.8	1982.70874	1987.87122	12.0	13.6	———
184	03	53	19.76	-37	03	59.1	1.16	200.65	9.1	H	03	53	19	-37	04	0	1.144	199.4	1980.93860	1991.90955	12.2	—	1818———
185	04	01	36.68	18	43	38.8	1.19	162.23	10.2		04	01	36	18	43	42	1.174	166.8	1950.93762	1991.78198	15.6	16.9	———
186	04	03	38.38	-05	08	5.5	1.17	167.90	10.8	P	04	03	39	-05	08	0	1.166	167.9	1982.80725	———	14.3	15.8	———
187	04	06	11.78	32	57	1.5	1.13	140.41	14.4	c	04	06	11	32	57	12	1.093	140.8	1955.86121	1993.70789	9.9	11.2	———
188	04	09	15.91	-53	22	25.7	1.23	63.48	95.4		04	09	7	-53	23	18	1.211	60.4	1978.77441	1994.98901	10.8	12.3	———
189	04	25	38.52	-06	52	39.4	1.43	143.21	81.0	bdm	04	25	38	-06	54	0	1.223	148.0	1982.71704	1989.89038	14.0	15.6	———
190	04	25	38.51	-06	52	39.4	1.43	143.70	80.9	bdm	04	25	38	-06	54	0	1.223	148.0	1982.71704	1989.89038	14.5	16.2	———
191	04	26	20.00	03	36	35.1	1.05	185.87	15.8		04	26	21	03	36	30	1.033	186.4	1953.86121	1986.76831	17.5	19.8	———
192	04	30	52.70	28	11	57.3	1.09	142.37	4.8		04	30	53	28	12	0	1.038	143.3	1955.80933	1989.89661	16.6	18.2	———
193	04	32	29.24	-38	59	47.8	0.10	164.63	21.3	b	04	32	31	-38	59	42	1.023	44.5	1983.03406	1992.07373	11.5	13.0	———
194	04	37	47.49	-08	49	12.1	1.66	167.19	22.4	b	04	37	49	-08	49	12	1.520	171.2	1982.78271	1990.89319	13.1	13.6	———
195	04	38	23.17	-65	24	58.6	1.54	39.79	21.1		04	38	20	-65	25	6	1.486	29.2	1979.86743	1989.98083	9.7	10.3	———
196	04	42	55.77	18	57	29.3	1.30	149.59	17.5	T	04	42	57	18	57	30	1.286	146.7	1955.94324	1991.77930	10.2	11.8	1275-02034-1
197	04	46	18.65	48	44	50.1	1.25	122.71	11.8		04	46	18	48	45	0	1.204	122.5	1953.77112	1988.84790	16.5	18.3	———
198	04	52	34.79	40	42	22.9	1.68	132.70	15.5		04	52	36	40	42	30	1.633	133.2	1953.02502	1989.74634	14.6	15.7	———
199	04	55	57.98	-61	09	45.2	1.10	123.00	53.2	P	04	56	3	-61	10	24	1.102	123.0	1980.78613	———	12.0	13.5	———
200	05	00	49.00	-05	45	13.2	1.24	153.63	4.8	TBbcs	05	00	49	-05	45	18	1.223	153.1	1984.88147	1985.05200	6.3	7.6	4762-01490-1
201	05	03	23.89	53	07	42.5	2.02	139.70	1.1	T	05	03	24	53	07	42	1.989	139.4	1954.97339	1989.89941	10.1	11.7	3734-00270-1
202	05	07	57.74	-53	01	43.9	1.17	27.50	130.2	P	05	08	12	-53	01	24	1.174	27.5	1986.97107	———	11.8	13.4	———
203	05	08	35.05	-18	10	19.3	1.49	160.15	1.5	TP	05	08	35	-18	10	18	1.376	156.6	1980.93872	———	10.5	12.0	5905-01336-1
204	05	13	05.28	-59	38	44.3	1.07	61.39	28.3	TP	05	13	9	-59	38	42	1.030	60.3	1980.78613	———	9.5	10.0	8517-02144-1
205	05	17	0.08	-78	17	19.6	1.11	176.10	21.2	P	05	16	54	-78	17	30	1.108	176.1	1978.02612	———	12.1	13.6	———
205a	05	19	56.78	20	10	50.4	1.08	153.03	11.2	c	05	19	56	20	10	48	1.024	153.2	1953.02246	1989.75195	18.1	21.0	———
206	05	28	14.70	02	58	13.5	1.16	195.68	10.6		05	28	14	02	58	12	1.186	198.1	1953.91333	1990.81763	12.3	14.2	———
207	05	38	12.58	79	31	18.8	1.21	136.06	122.7		05	37	32	79	32	12	1.192	141.2	1955.03894	1997.18115	18.5	20.3	———
208	05	37	9.55	-80	28	9.0	1.10	16.90	66.3	P	05	37	36	-80	28	0	1.100	16.9	1978.02612	———	5.5	6.4	———
209	05	44	3.54	40	56	48.8	1.21	147.90	16.6		05	44	5	40	56	48	1.229	147.2	1953.02515	1989.76550	14.9	16.4	———
210	05	44	32.14	-70	08	42.2	1.01	349.12	34.3	c	05	44	37	-70	09	6	1.321	346.6	1975.93591	1987.90686	8.5	9.1	———
211	05	48	0.26	08	22	12.5	1.27	136.37	65.6		05	47	56	08	22	30	1.218	135.4	1955.89697	1991.85864	13.5	16.0	———
212	05	56	25.52	05	21	47.4	1.04	204.79	7.2		05	56	26	05	21	48	1.056	207.0	1950.94324	1989.84753	14.2	14.8	———
213	06	00	46.72	68	08	28.8	1.18	159.19	26.1	d	06	00	49	68	08	6	1.174	161.4	1953.12378	1996.79358	13.1	14.6	———
214	06	00	49.68	68	09	22.1	1.19	159.15	25.6	d	06	00	52	68	09	0	1.174	161.4	1953.12378	1996.79358	12.9	14.2	———
215	06	10	19.59	82	06	23.9	1.35	177.83	7.4		06	10	16	82	06	24	1.337	180.7	1955.07739	1997.18115	11.2	12.8	———
216	06	14	1.55	15	09	54.1	1.45	149.38	8.0		06	14	1	15	09	54	1.399	152.8	1955.89612	1997.10168	14.8	16.4	———
217	06	21	10.41	65	59	34.1	0.63	349.12	98.2		06	21	15	65	58	0	1.148	156.8	1953.12378	1989.97339	15.0	16.3	———
218	06	37	58.12	34	30	19.6	1.26	170.11	2.1		06	37	58	34	30	18	1.264	176.7	1954.84241	1996.77722	13.8	15.8	———
219	06	45	08.93	-16	42	58.0	1.34	204.06	2.2	HNP	06	45	9	-16	43	0	1.323	204.0	1979.88135	———	-1.1	—	32349
220	06	49	5.58	37	06	49.0	1.65	171.59	7.1		06	49	6	37	06	54	1.618	172.3	1954.84241	1989.83679	13.2	15.1	———
221	06	54	4.30	60	52	18.2	1.15	152.30	6.6	P	06	54	4	60	52	12	1.147	152.3	1954.83972	———	11.5	13.0	———
222	06	57	46.81	-44	17	28.4	1.00	265.27	86.1		06	57	39	-44	17	48	1.134	265.0	1980.11877	1994.92871	11.4	13.2	———

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
223	06	59	28.93	19	20	53.3	1.33	135.40	13.2		06	59	28	19	20	54	1.225	137.3	1951.85327	1989.84229	14.1	15.9	——
224	07	03	55.88	52	42	5.8	1.17	141.89	31.8	c	07	03	57	52	42	36	1.166	141.7	1954.07458	1989.92700	12.9	14.7	——
225	07	04	45.94	-38	36	9.2	1.30	102.81	65.7		07	04	50	-38	35	24	1.206	100.9	1980.20605	1995.06580	12.4	13.5	——
226	07	10	01.84	38	31	46.1	1.04	205.28	14.1	T	07	10	2	38	32	0	1.052	207.9	1953.86157	1989.85596	11.8	13.1	2944-01956-1
227	07	13	40.55	-13	27	58.1	1.28	157.64	7.7	b	07	13	41	-13	27	54	1.277	153.3	1981.17651	1986.19177	14.2	15.5	——
228	07	16	27.40	23	42	15.8	1.28	338.70	34.3		07	16	27	23	41	42	1.123	122.0	1956.26819	1997.02539	15.1	16.8	——
229	07	30	42.57	48	11	58.8	1.29	189.80	5.8	Pd	07	30	42	48	12	0	1.295	189.8	1953.12122	——	12.9	15.1	——
230	07	30	47.23	48	10	26.6	1.29	189.80	4.1	Pd	07	30	47	48	10	30	1.295	189.8	1953.12122	——	14.6	15.5	——
231	07	33	52.82	22	23	30.1	1.14	125.93	12.8		07	33	52	22	23	36	1.104	122.8	1954.97363	1991.18127	15.4	17.6	——
232	07	35	46.31	03	29	37.3	1.02	170.20	4.8	P	07	35	46	03	29	36	1.022	170.2	1955.95715	——	13.6	14.7	——
233	07	39	19.72	05	13	18.0	1.25	214.70	26.4	PWs	07	39	18	05	13	24	1.251	214.7	1955.95715	——	0.4	0.7	——
234	07	40	20.79	-17	24	39.3	0.96	120.73	14.3	Bbd	07	40	20	-17	24	48	1.252	116.6	1983.01807	1984.97266	15.9	17.6	——
235	07	40	20.85	-17	24	50.9	2.01	128.31	3.8	Bbd	07	40	21	-17	24	54	1.252	116.6	1983.01807	1984.97266	13.1	13.0	——
236	07	43	24.79	72	48	48.8	1.24	165.47	6.3		07	43	24	72	48	54	1.246	170.2	1953.13220	1991.93274	13.0	14.5	——
237	07	45	34.99	-34	10	20.8	1.71	350.77	3.2	Tcs	07	45	35	-34	10	24	1.688	350.3	1977.06445	1991.87402	5.4	6.0	7114-02950-1
237a	07	45	38.00	-33	47	48.0	1.69	350.30	—	N	07	45	38	-33	47	48	1.688	350.3	1977.06445	1991.87402	16.0	18.0	——
238	07	48	16.39	20	22	5.4	1.76	124.13	5.5	TP	07	48	16	20	22	6	1.728	124.2	1955.94629	——	11.8	13.4	1370-02407-1
239	07	50	14.83	07	11	47.3	1.84	170.76	12.4	d	07	50	14	07	11	48	1.778	173.2	1955.95715	1990.90808	17.0	18.1	——
240	07	50	15.59	07	11	35.4	1.85	170.77	8.8	d	07	50	15	07	11	36	1.778	173.2	1955.95715	1990.90808	16.9	17.8	——
241	07	53	33.00	30	55	6.0	1.97	158.80	—	N	07	53	33	30	55	6	1.973	158.8	1955.19495	1989.08276	8.1	8.8	——
242	08	00	32.13	29	12	44.5	1.18	188.38	8.6	Tcs	08	00	32	29	12	36	1.177	187.4	1955.19495	1989.83691	7.1	7.9	1938-00445-1
243	08	03	6.27	34	56	52.9	1.61	196.72	3.5		08	03	6	34	56	54	1.571	198.3	1954.15405	1988.94910	15.4	17.6	——
244	08	13	27.80	-09	27	57.1	1.67	131.27	4.2	Bb	08	13	28	-09	28	0	1.480	141.5	1983.10559	1986.18359	13.6	15.4	——
245	08	18	23.95	-12	37	55.8	1.03	164.18	4.2	TBcs	08	18	24	-12	38	0	1.017	164.8	1983.10559	1986.18359	6.0	6.9	5435-02991-1
246	08	25	52.97	69	01	59.8	1.44	206.81	20.1		08	25	50	69	02	12	1.377	205.4	1953.13220	1995.09387	15.5	17.0	——
247	08	28	22.14	35	00	59.2	1.05	252.03	5.4	T	08	28	22	35	00	54	1.102	251.5	1953.02551	1989.85889	11.1	12.7	2489-00672-1
248	08	29	49.47	26	46	32.2	1.27	238.45	22.0		08	29	48	26	46	42	1.290	242.2	1955.21692	1989.91626	14.4	16.0	——
249	08	32	51.50	-31	30	3.0	1.35	304.42	7.0	Ts	08	32	52	-31	30	6	1.350	304.3	1977.21204	1991.26025	6.5	7.4	7135-02774-1
250	08	35	49.28	68	04	9.0	0.97	236.23	83.0		08	36	4	68	04	0	1.010	233.1	1954.89722	1995.09387	12.4	13.7	——
251	08	36	25.46	67	17	42.3	1.06	272.62	3.1	Ts	08	36	26	67	17	42	1.030	273.5	1954.89722	1995.09387	9.5	11.1	4133-00241-1
252	08	41	20.25	59	29	49.6	1.32	190.11	2.5		08	41	20	59	29	48	1.310	191.2	1954.90540	1996.20813	14.1	16.3	——
253	08	41	32.56	-32	56	34.9	1.60	322.05	22.5		08	41	31	-32	56	24	1.709	322.0	1979.97168	1994.24390	12.2	11.9	——
254	08	54	12.50	-08	05	1.7	1.35	129.00	7.6	b	08	54	12	-08	05	0	1.240	130.8	1982.07849	1991.13696	16.4	17.9	——
255	08	55	7.93	01	32	43.8	1.27	166.31	2.1	bs	08	55	8	01	32	42	1.066	176.7	1982.06189	1990.96277	9.6	11.1	——
256	08	55	24.82	70	47	39.2	1.41	254.55	16.7	Tdms	08	55	22	70	47	30	1.394	255.2	1955.06958	1995.09387	8.8	10.4	4378-02162-1
257	08	55	24.90	70	47	38.5	1.37	255.20	12.7	Tdms	08	55	23	70	47	30	1.394	255.2	1955.06958	1995.09387	9.1	10.8	4378-02162-2
258	08	59	5.42	-31	13	27.1	1.16	139.33	11.8		08	59	6	-31	13	18	1.005	136.6	1979.23950	1993.20825	14.0	15.3	——
259	09	00	52.21	48	25	23.6	1.08	191.69	13.3		09	00	51	48	25	18	1.130	193.3	1954.17871	1991.11853	12.9	14.2	——
260	09	14	22.77	52	41	11.8	1.66	249.88	9.1	Tcdms	09	14	22	52	41	6	1.690	248.1	1954.14868	1991.25525	7.8	9.4	3806-01814-1
261	09	14	24.69	52	41	10.9	1.69	247.06	5.7	Tdms	09	14	25	52	41	6	1.690	248.1	1954.14868	1991.25525	7.9	9.5	3806-01819-1
262	09	15	56.20	53	25	22.8	1.56	222.89	7.5		09	15	56	53	25	30	1.550	223.5	1954.14868	1991.25525	13.7	13.8	——
263	09	17	6.07	-77	49	25.1	1.11	141.26	63.5		09	16	55	-77	50	18	1.023	139.3	1978.10571	1996.13391	13.4	14.9	——
264	09	17	30.50	77	14	40.7	1.07	270.27	8.9	T	09	17	32	77	14	48	1.050	269.7	1953.18433	1997.11023	10.4	12.1	4541-00108-1
265	09	17	46.01	58	25	21.7	1.17	177.82	27.4		09	17	45	58	25	48	1.134	180.6	1954.90540	1997.10486	14.2	15.8	——
266	09	20	22.04	26	43	40.7	1.13	123.23	14.0		09	20	21	26	43	42	1.007	120.8	1955.22522	1987.24695	14.7	17.6	——
267	09	20	57.99	03	22	6.4	1.18	161.73	0.5	B	09	20	58	03	22	6	1.178	163.2	1949.91357	1991.09949	12.3	13.8	——
268	09	24	22.33	-80	31	24.6	1.15	16.69	10.6	s	09	24	19	-80	31	18	1.253	8.5	1978.10571	1996.13391	10.6	11.0	——
269	09	29	18.79	25	58	34.5	1.09	254.80	121.9	P	09	29	10	25	58	6	1.086	254.8	1949.89990	——	15.8	17.3	——
270	09	32	51.36	51	40	36.2	1.14	240.06	3.4	cs	09	32	51	51	40	36	1.093	240.1	1953.13232	1995.24426	3.2	3.6	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
271	09	42	46.28	-68	53	9.0	1.02	353.77	36.4		09	42	53	-68	53	12	1.120	356.8	1976.25256	1991.13147	13.5	15.2	——
272	09	43	46.18	-17	47	6.6	1.47	278.65	2.6		09	43	46	-17	47	6	1.426	280.0	1977.07019	1996.13110	12.5	14.8	——
273	09	44	47.40	-18	12	48.7	1.61	265.61	8.6		09	44	48	-18	12	48	1.633	264.0	1977.07019	1996.13110	12.4	14.4	——
274	09	51	9.98	-12	19	56.9	2.56	143.39	16.9	bc	09	51	9	-12	19	48	1.807	143.5	1983.35437	1987.31238	9.9	11.4	——
276	10	00	44.28	32	18	34.3	1.22	236.85	3.9		10	00	44	32	18	36	1.197	236.0	1955.19788	1988.94934	10.7	12.5	——
277	10	01	10.73	-30	23	24.5	1.27	300.28	120.0	T	10	01	20	-30	23	24	1.297	297.9	1980.20068	1995.15063	11.9	12.9	7169-02072-1
278	10	02	21.86	48	05	17.4	1.65	201.70	60.6		10	02	22	48	06	18	1.571	203.8	1953.12146	1989.93005	10.2	11.8	——
279	10	09	17.09	35	14	53.5	1.28	210.74	1.2		10	09	17	35	14	54	1.277	212.4	1955.19788	1988.94934	15.2	16.8	——
280	10	11	22.14	49	27	15.2	1.45	249.60	11.6	Tcs	10	11	21	49	27	12	1.455	249.5	1955.21167	1989.93005	6.8	8.3	3437-00811-1
281	10	14	51.90	-47	09	26.5	0.99	289.31	17.1		10	14	51	-47	09	12	1.137	292.2	1978.17139	1992.24585	13.6	14.7	——
282	10	25	23.93	00	43	2.0	1.27	175.01	4.2	b	10	25	24	00	43	6	1.101	184.6	1983.17957	1991.27173	18.0	17.5	——
283	10	35	26.75	69	27	1.7	1.75	250.50	7.8	P	10	35	27	69	26	54	1.752	250.5	1953.17883	——	12.0	13.3	——
284	10	36	3.91	-14	42	18.4	0.74	135.43	17.6	Bb	10	36	3	-14	42	30	1.120	297.9	1984.08105	1986.25208	16.4	17.7	——
285	10	37	1.92	71	10	55.7	2.00	254.20	63.4	P	10	36	49	71	11	6	1.997	254.2	1953.17883	——	16.4	17.3	——
286	10	37	28.96	30	11	9.1	1.00	231.86	29.5		10	37	27	30	10	54	1.011	233.1	1955.28259	1990.00110	17.8	19.4	——
287	10	41	37.81	37	36	39.7	1.52	258.00	21.8		10	41	36	37	36	36	1.505	256.1	1953.34583	1990.21960	11.8	13.8	——
288	10	44	32.00	-61	11	42.0	1.66	348.10	—	2N	10	44	32	-61	11	42	1.657	348.1	1987.05127	——	13.8	15.3	——
289	10	45	39.09	-19	06	51.8	1.97	251.99	103.0	Tdm	10	45	33	-19	07	48	1.980	250.5	1980.20093	1995.09045	11.2	13.0	6078-01934-1
290	10	45	39.05	-19	06	52.9	1.94	251.14	101.9	dm	10	45	33	-19	07	48	1.980	250.5	1980.20093	1995.09045	16.2	16.5	——
291	10	45	59.69	59	04	50.5	1.78	213.29	52.1		10	45	58	59	04	0	1.770	214.3	1954.01221	1991.28540	17.2	17.6	——
292	10	48	12.75	-11	20	11.4	2.91	145.34	3.7	Bb	10	48	13	-11	20	12	1.644	158.5	1984.18188	1986.02466	14.8	16.7	——
293	10	49	45.36	35	32	50.0	1.23	213.20	16.7	P	10	49	44	35	32	48	1.231	213.2	1953.34583	——	11.8	13.9	——
294	10	50	52.12	06	48	27.6	1.19	224.15	3.0		10	50	52	06	48	30	1.150	225.1	1953.28552	1991.06409	10.8	12.5	——
295	10	52	4.35	13	59	49.7	1.10	278.77	9.2		10	52	4	13	59	42	1.126	279.6	1954.11072	1993.22253	11.7	13.5	——
296	11	01	19.75	03	00	15.9	1.20	111.72	11.4		11	01	19	03	00	18	1.103	112.3	1953.28552	1995.15417	13.1	14.7	——
297	11	10	8.30	28	56	51.6	1.03	242.80	9.9	P	11	10	9	28	56	48	1.035	242.8	1955.21997	——	12.3	14.0	——
298	11	11	10.70	-10	57	3.2	1.11	302.28	18.4	Tbcs	11	11	10	-10	56	48	1.067	302.4	1983.28625	1992.03821	9.4	10.7	5504-00085-1
299	11	11	22.70	-06	31	58.3	2.16	159.81	11.3	Bb	11	11	22	-06	31	54	1.107	202.5	1984.17651	1985.05481	13.6	15.5	——
300	11	11	13.66	-41	05	35.2	1.26	259.44	108.3		11	11	22	-41	04	42	1.277	264.5	1975.19055	1990.09595	12.8	13.9	——
301	11	21	38.50	06	08	26.0	1.77	205.63	7.7		11	21	39	06	08	24	1.749	206.0	1955.28821	1996.27368	13.0	14.3	——
302	11	23	8.10	25	53	35.2	1.03	249.52	1.6		11	23	8	25	53	36	1.059	252.0	1955.21997	1992.32288	14.0	16.2	——
303	11	23	44.58	08	33	48.6	1.02	281.01	9.1	T	11	23	45	08	33	42	1.036	278.4	1950.27734	1989.26355	11.2	12.3	0855-00836-1
304	11	24	13.06	21	21	34.8	1.01	268.24	1.4		11	24	13	21	21	36	1.050	270.2	1955.21997	1995.23071	13.9	14.3	——
305	11	28	27.75	07	31	2.2	1.25	192.73	11.8	T	11	28	27	07	31	6	1.189	192.6	1955.28821	1989.26355	10.3	11.6	0856-01259-1
306	11	31	8.36	-14	57	22.9	1.57	163.67	20.3	b	11	31	7	-14	57	18	1.393	164.0	1983.35730	1991.27942	13.6	15.3	——
307	11	32	45.13	43	59	41.5	1.15	167.00	1.5	P	11	32	45	43	59	42	1.146	167.0	1953.28296	——	13.9	15.6	——
308	11	34	29.49	-32	49	52.8	1.06	320.93	6.5	Tcds	11	34	30	-32	49	54	1.063	320.3	1975.19336	1991.12061	6.0	7.0	7220-00866-1
309	11	34	29.74	-32	49	56.6	0.94	321.03	18.4	cdms	11	34	31	-32	50	6	1.063	320.3	1975.19336	1991.12061	15.0	17.0	——
310	11	42	11.10	26	42	23.8	1.22	132.23	83.1		11	42	9	26	43	42	1.080	135.5	1955.27466	1996.37207	10.8	12.6	——
311	11	46	31.07	-40	30	1.3	1.58	284.74	56.2	Tcds	11	46	36	-40	30	0	1.592	284.4	1977.07043	1996.21313	5.0	5.7	7745-01381-1
312	11	46	35.15	50	52	54.7	1.03	237.96	17.5	T	11	46	37	50	52	54	1.036	238.1	1950.21741	1991.10522	9.9	10.6	3454-02098-1
313	11	46	31.11	-40	30	1.9	1.58	287.40	79.8	cdms	11	46	38	-40	29	48	1.592	284.4	1977.07043	1996.21313	15.0	—	——
314	11	46	42.90	-14	00	51.8	1.06	137.77	18.8	Hb	11	46	44	-14	00	42	1.035	132.6	1983.35461	1991.27942	11.7	—	57459
315	11	47	44.33	00	48	17.4	1.35	152.00	12.0	P	11	47	45	00	48	24	1.348	152.0	1984.39172	——	11.1	12.8	——
316	11	50	57.81	48	22	37.8	1.80	237.15	8.3		11	50	57	48	22	36	1.821	237.5	1955.16272	1991.11072	12.7	14.3	——
317	11	53	12.47	-31	23	57.2	1.13	259.66	7.5		11	53	13	-31	23	54	1.140	263.1	1979.17432	1995.10413	12.8	14.8	——
318	11	56	54.82	26	39	56.1	1.39	154.49	4.6		11	56	55	26	40	0	1.380	154.6	1955.27466	1996.37207	14.8	16.1	——
319	11	57	56.21	-27	42	25.4	1.24	240.10	3.1	Tcs	11	57	56	-27	42	24	1.246	239.5	1978.13062	1993.20825	7.1	8.4	6674-00576-1
320	12	02	33.74	08	25	48.8	1.18	217.19	63.4		12	02	38	08	25	54	1.116	219.9	1955.28284	1996.30408	13.0	14.3	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
321	12	02	40.21	36	36	5.8	1.05	203.82	2.5		12	02	40	36	36	6	1.053	207.6	1956.35022	1989.04236	12.2	13.3	——
322	12	15	10.97	-10	18	50.7	1.41	162.87	2.7	bcs	12	15	11	-10	18	48	1.024	178.2	1984.25842	1989.18079	6.0	6.5	——
323	12	17	30.28	-29	02	22.0	1.05	263.05	4.2		12	17	30	-29	02	24	1.145	265.9	1975.35461	1993.38904	16.6	18.1	——
324	12	18	59.49	11	07	32.8	1.26	278.51	8.0		12	19	0	11	07	30	1.301	279.1	1955.28284	1991.26917	12.9	15.4	——
325	12	21	32.93	28	54	21.1	1.03	251.94	46.5		12	21	32	28	55	6	1.042	253.9	1955.29382	1993.21729	16.7	18.3	——
325a	12	23	56.31	-27	57	47.8	1.22	282.61	9.2		12	23	57	-27	57	48	1.293	284.4	1975.35461	1993.38904	17.9	21.0	——
326	12	24	26.84	-04	43	37.0	1.31	241.40	12.6	P	12	24	26	-04	43	36	1.311	241.4	1984.17664	——	14.2	15.8	——
327	12	25	50.90	-24	33	19.4	0.93	258.13	1.9		12	25	51	-24	33	18	1.013	264.0	1979.45032	1994.29041	12.3	13.4	——
328	12	28	40.34	-71	27	54.2	0.95	338.78	40.3	bd	12	28	32	-71	27	48	1.170	338.1	1987.18799	1994.10132	13.8	15.1	——
329	12	28	43.24	-71	27	59.5	0.94	331.39	39.7	bd	12	28	35	-71	27	54	1.170	338.1	1987.18799	1994.10132	15.7	17.3	——
330	12	29	14.28	53	33	5.0	1.21	275.52	2.7	d	12	29	14	53	33	6	1.232	275.1	1953.28857	1996.35046	17.2	19.7	——
331	12	29	14.52	53	32	43.8	1.22	274.59	6.3	d	12	29	14	53	32	48	1.232	275.1	1953.28857	1996.35046	14.0	15.5	——
332	12	29	34.58	-55	59	38.8	1.22	224.14	51.4		12	29	29	-56	00	0	1.250	231.9	1976.47913	1991.12061	14.1	15.4	——
333	12	33	17.50	09	01	14.1	1.73	275.94	8.4		12	33	17	09	01	18	1.811	277.4	1956.19226	1991.20911	12.4	14.1	——
334	12	34	15.76	20	37	5.6	1.37	167.38	3.4		12	34	16	20	37	6	1.338	167.6	1955.38684	1996.36401	16.9	19.7	——
335	12	34	53.25	05	03	52.6	1.14	256.77	4.0		12	34	53	05	03	54	1.163	258.8	1956.18958	1996.27112	16.0	17.5	——
336	12	37	52.23	-52	00	5.3	1.02	271.75	5.7	T	12	37	52	-52	00	0	1.035	271.4	1979.15515	1994.41638	10.9	13.6	8244-03175-1
337	12	38	49.19	-38	22	55.7	1.51	202.07	31.8		12	38	49	-38	22	24	1.487	207.2	1982.37109	1995.39453	12.7	14.2	——
338	12	38	52.55	11	41	44.7	1.16	256.68	7.4		12	38	53	11	41	48	1.163	258.5	1956.19226	1991.20911	11.2	12.8	——
339	12	40	24.31	-23	17	44.5	1.06	219.97	4.9		12	40	24	-23	17	42	1.102	219.9	1979.45032	1994.29041	16.7	16.5	——
340	12	40	46.46	-43	33	59.0	1.05	311.57	16.8	H	12	40	48	-43	34	0	1.047	311.7	1976.30469	1991.41370	12.3	—	61874
341	12	47	56.64	09	45	5.0	1.11	245.42	5.4	H	12	47	57	09	45	6	1.077	246.8	1950.12988	1991.20911	11.4	—	62452
342	12	50	7.85	54	47	4.9	1.31	190.83	1.7		12	50	8	54	47	6	1.286	192.2	1953.28857	1996.35046	17.1	18.6	——
343	12	56	23.83	15	41	43.0	1.42	198.32	16.9		12	56	25	15	41	42	1.440	200.5	1956.20325	1991.13538	13.3	14.6	——
344	13	04	57.38	-52	26	36.7	1.14	222.98	31.9	cs	13	04	55	-52	27	0	1.151	224.9	1976.31030	1993.46851	9.2	10.5	——
345	13	08	39.67	08	04	21.4	1.01	282.09	5.6		13	08	40	08	04	24	1.026	281.0	1956.18970	1995.15442	15.0	16.9	——
346	13	09	20.51	-40	09	29.4	1.34	142.79	24.1		13	09	20	-40	09	6	1.196	142.4	1979.15808	1994.25757	13.1	14.6	——
347	13	10	1.88	22	30	3.8	1.17	230.60	4.1		13	10	2	22	30	0	1.140	229.5	1956.21130	1991.37036	12.5	13.8	——
348	13	11	52.39	27	52	41.5	1.19	317.77	5.2	Tcs	13	11	52	27	52	42	1.186	317.5	1955.28833	1993.28845	4.3	4.9	1996-02400-1
349	13	18	24.29	-18	18	42.3	1.51	222.89	4.2	cs	13	18	24	-18	18	42	1.521	225.0	1976.49011	1993.21375	4.7	5.5	——
350	13	22	56.83	24	28	2.6	1.06	213.76	3.5		13	22	57	24	28	0	1.080	215.6	1950.38147	1991.37036	12.2	13.8	——
351	13	29	21.29	11	26	26.6	1.24	165.29	10.7		13	29	22	11	26	24	1.228	165.0	1955.37036	1997.27771	11.7	13.4	——
352	13	29	59.85	10	22	38.1	1.63	131.19	3.1	s	13	30	0	10	22	36	1.525	134.2	1955.37036	1997.27771	9.5	10.6	——
353	13	30	2.78	-08	42	25.4	1.21	248.60	12.4		13	30	2	-08	42	30	1.202	246.2	1983.19360	1995.40552	14.0	15.6	——
354	13	30	13.62	-08	34	29.4	1.21	249.54	142.8		13	30	4	-08	34	24	1.188	247.7	1983.19360	1995.40552	12.6	12.1	——
355	13	30	31.17	19	09	33.0	1.36	198.75	3.9		13	30	31	19	09	30	1.397	200.5	1950.29395	1992.19507	13.7	15.4	——
356	13	37	17.43	35	01	0.5	1.20	253.46	9.5		13	37	18	35	00	54	1.232	252.9	1950.37061	1989.18457	15.7	17.2	——
357	13	40	8.87	43	46	37.2	1.10	285.29	9.5		13	40	8	43	46	36	1.144	285.2	1950.46362	1994.42249	12.3	13.4	——
358	13	41	11.50	30	01	24.6	1.54	275.27	36.0		13	41	11	30	02	0	1.599	273.7	1950.42529	1996.51965	16.5	18.3	——
359	13	45	05.08	17	47	7.6	1.89	166.04	1.9	T	13	45	5	17	47	6	1.898	166.7	1954.24756	1992.19507	10.0	11.6	1463-00985-1
360	13	46	55.60	05	42	55.8	1.13	220.79	6.2		13	46	56	05	42	54	1.142	222.2	1950.29956	1993.35950	14.2	16.0	——
361	13	48	3.08	23	34	45.0	1.46	274.03	3.2	d	13	48	3	23	34	48	1.484	275.6	1950.27771	1996.38330	14.9	16.5	——
362	13	48	13.48	23	36	47.4	1.46	273.82	6.6	d	13	48	13	23	36	48	1.484	275.6	1950.27771	1996.38330	14.3	16.3	——
363	13	49	44.81	-22	06	39.9	1.82	254.21	3.4	Tcs	13	49	45	-22	06	42	1.805	254.4	1977.15259	1993.29041	8.4	9.8	6135-00445-1
364	14	06	55.66	38	36	54.4	1.11	159.48	101.9		14	06	55	38	38	36	1.046	159.7	1955.28308	1995.31299	13.3	14.9	——
365	14	15	16.10	47	47	25.3	1.40	236.01	22.7		14	15	16	47	47	48	1.436	237.5	1950.37878	1989.17639	15.5	17.1	——
366	14	15	32.69	04	39	29.9	1.07	220.99	12.0		14	15	32	04	39	36	1.060	225.3	1950.30505	1989.26941	13.2	15.3	——
367	14	18	20.77	-52	24	14.4	0.95	233.98	20.7	b	14	18	23	-52	24	18	1.118	248.4	1988.46826	1993.46570	14.4	15.0	——
368	14	19	11.06	-07	18	13.0	1.54	206.43	1.4	Bb	14	19	11	-07	18	12	1.355	235.5	1983.49695	1985.22192	13.4	15.2	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
369	14	20	7.45	-09	37	14.8	1.58	184.72	7.2	Bb	14	20	7	-09	37	12	1.062	215.2	1984.24231	1985.22192	12.8	14.6	——
370	14	20	53.00	36	57	16.1	1.35	278.97	7.9		14	20	53	36	57	24	1.363	279.6	1950.38428	1992.33423	15.3	17.2	——
371	14	25	43.48	23	37	1.5	1.37	144.59	8.0	Tds	14	25	43	23	37	6	1.376	144.9	1950.21777	1996.29895	9.9	11.7	2008-00790-1
372	14	25	46.76	23	37	14.5	1.37	143.19	11.0	ds	14	25	46	23	37	18	1.376	144.9	1950.21777	1996.29895	9.7	11.3	——
373	14	29	29.71	15	31	57.5	1.68	321.15	5.5	T	14	29	30	15	31	54	1.711	321.8	1955.35962	1994.33765	10.9	12.5	1476-01306-1
374	14	30	47.72	-08	38	46.8	1.29	259.25	4.3	TBcs	14	30	48	-08	38	48	1.269	260.0	1984.24231	1985.22192	9.6	11.3	5563-00779-1
375	14	31	38.37	-25	25	33.9	1.32	269.51	6.3		14	31	38	-25	25	30	1.386	268.6	1976.40295	1992.24585	14.8	16.8	——
376	14	35	8.96	16	53	53.1	1.55	253.74	11.1		14	35	9	16	53	42	1.555	255.5	1955.35962	1993.36230	14.1	15.6	——
377	14	39	0.44	18	39	37.5	1.25	178.54	7.7		14	39	0	18	39	42	1.230	180.3	1955.35962	1992.19250	17.1	20.2	——
378	14	47	25.43	-17	42	16.7	1.06	247.42	7.7		14	47	25	-17	42	12	1.177	252.6	1983.36035	1994.18628	16.0	16.6	——
379	14	49	31.53	-26	06	32.4	1.14	260.32	12.0	d	14	49	31	-26	06	42	1.217	260.7	1983.29199	1996.28687	12.2	13.5	——
380	14	49	33.34	-26	06	21.6	1.14	257.85	9.6	d	14	49	33	-26	06	30	1.217	260.7	1983.29199	1996.28687	11.9	13.2	——
381	14	50	28.89	-08	38	38.2	1.73	182.82	2.8	Bb	14	50	29	-08	38	36	1.589	190.1	1983.34937	1986.48218	14.4	15.9	——
382	14	50	41.80	-16	56	35.0	1.16	218.94	15.9	b	14	50	41	-16	56	24	1.451	242.7	1983.36035	1987.41638	14.5	15.8	——
383	14	51	40.47	-24	18	14.9	1.04	245.48	7.8	Tcs	14	51	41	-24	18	12	1.020	245.0	1983.29199	1996.28687	7.9	9.1	6747-01787-1
384	14	55	11.05	53	40	49.2	1.08	296.21	1.3	Tcs	14	55	11	53	40	48	1.083	295.3	1953.27783	1991.43896	7.8	8.8	3861-00376-1
385	14	55	35.98	-15	33	48.6	1.91	202.11	14.2	b	14	55	35	-15	33	48	1.736	209.6	1982.52441	1987.41638	14.2	15.7	——
386	14	57	26.60	-21	24	43.7	2.10	147.89	9.5	cds	14	57	27	-21	24	36	1.994	149.2	1978.43701	1993.29858	8.6	10.2	——
387	14	57	28.00	-21	24	55.8	2.02	149.16	7.8	Tcds	14	57	28	-21	24	48	1.994	149.2	1978.43701	1993.29858	5.9	7.2	6180-00855-1
388	14	57	32.29	31	23	44.8	1.35	210.58	9.5	T	14	57	33	31	23	42	1.374	211.1	1955.28308	1994.58411	11.7	13.0	2555-01164-3
389	15	03	24.67	03	46	55.8	1.10	306.87	6.5		15	03	25	03	47	0	1.136	308.3	1955.37048	1994.41724	11.6	13.2	——
390	15	06	14.35	-37	25	20.4	1.16	200.52	43.6	H	15	06	18	-37	25	24	1.114	201.9	1975.19373	1991.44934	12.8	—	73903
391	15	07	23.59	24	56	7.9	0.98	300.73	8.3	T	15	07	23	24	56	6	1.004	299.3	1950.29688	1991.36792	10.2	12.0	2024-01358-1
392	15	11	50.62	-10	14	18.6	0.96	252.84	20.4		15	11	52	-10	14	18	1.005	257.6	1982.54077	1996.22949	13.6	15.2	——
393	15	13	50.90	-01	21	5.0	1.37	248.43	298.5	T	15	13	31	-01	21	0	1.375	248.8	1955.29956	1994.36511	6.7	7.5	5001-00567-1
394	15	19	27.22	-07	43	22.5	0.95	256.73	21.0	b	15	19	26	-07	43	12	1.224	256.3	1981.33594	1991.21094	10.6	12.3	——
395	15	21	48.15	-48	19	3.5	1.64	260.37	9.2	Tbcs	15	21	49	-48	19	0	1.645	260.1	1987.31409	1992.57654	5.7	6.4	8298-01229-1
396	15	23	51.20	17	27	56.1	1.34	196.24	4.8		15	23	51	17	28	0	1.302	196.8	1950.29968	1992.49231	13.1	15.0	——
397	15	32	12.93	-41	16	32.1	1.56	228.75	44.5	TP	15	32	9	-41	16	36	1.539	228.5	1988.30237	——	9.5	11.2	7844-01976-1
398	15	34	27.90	02	16	45.6	1.10	257.17	2.8		15	34	28	02	16	48	1.196	262.7	1982.52161	1993.45264	14.1	15.7	——
399	15	35	20.58	17	42	46.4	1.21	261.70	8.4	d	15	35	20	17	42	48	1.219	263.0	1950.29419	1992.49231	11.9	13.8	——
400	15	35	20.36	17	43	3.8	1.22	261.54	5.6	d	15	35	20	17	43	6	1.219	263.0	1950.29419	1992.49231	14.0	15.7	——
401	15	39	39.28	-55	09	11.8	1.14	184.87	65.0		15	39	32	-55	09	30	1.152	190.3	1975.51343	1992.55188	13.7	15.0	——
402	15	40	3.80	43	29	37.4	1.26	104.95	11.4	dm	15	40	3	43	29	30	1.225	106.3	1955.24768	1989.18481	12.0	13.6	——
403	15	40	3.81	43	29	37.4	1.28	104.80	16.0	dm	15	40	3	43	29	24	1.225	106.3	1955.24768	1989.18481	13.0	14.5	——
404	15	41	16.63	75	59	34.0	1.10	132.47	14.1	T	15	41	17	75	59	48	1.141	133.8	1953.52380	1994.43909	12.4	14.1	4560-03069-1
405	15	43	03.10	-10	56	0.6	1.16	254.87	1.6	Tbcs	15	43	3	-10	56	0	1.187	254.2	1982.55164	1990.32874	7.3	7.8	5601-00694-1
406	15	43	18.48	-20	15	34.6	1.21	190.30	12.9		15	43	19	-20	15	24	1.143	194.4	1976.40857	1991.60828	13.1	14.4	——
407	15	45	40.41	-20	36	17.5	1.22	241.99	5.8	m	15	45	40	-20	36	18	1.375	243.5	1976.40857	1991.60828	15.8	18.0	——
408	15	56	27.20	15	39	39.8	1.38	166.95	8.7	c	15	56	27	15	39	48	1.328	166.4	1950.29443	1994.43652	3.8	4.2	——
409	15	57	13.12	05	05	59.1	1.39	177.84	5.4	d	15	57	13	05	05	54	1.398	177.3	1954.39539	1994.33789	14.6	16.3	——
410	15	57	14.74	05	07	2.3	1.39	177.43	4.5	d	15	57	15	05	07	0	1.398	177.3	1954.39539	1994.33789	12.3	14.7	——
411	16	02	51.03	20	35	19.6	1.59	215.85	27.7		16	02	53	20	35	18	1.571	217.6	1950.36816	1987.30518	12.4	14.1	——
412	16	08	15.07	-10	26	14.2	1.35	195.10	13.9	P	16	08	16	-10	26	12	1.354	195.1	1982.60376	——	14.0	16.1	——
413	16	13	48.63	-57	34	14.1	1.64	209.40	34.0	P	16	13	49	-57	34	48	1.635	209.4	1988.43054	——	9.1	10.0	——
414	16	14	26.42	02	14	47.2	1.55	244.15	8.2		16	14	26	02	14	42	1.570	247.3	1980.23157	1994.42822	14.1	15.8	——
415	16	20	2.53	-37	31	27.7	3.70	326.78	21.1	bdm	16	20	3	-37	31	48	1.222	324.5	1986.41248	1991.27942	10.4	12.0	——
416	16	20	2.53	-37	31	27.7	3.70	326.81	26.9	bdm	16	20	3	-37	31	54	1.222	324.5	1986.41248	1991.27942	14.3	16.0	——
417	16	24	09.32	48	21	10.5	1.23	111.50	3.5	Ts	16	24	9	48	21	12	1.231	111.6	1955.24512	1992.42151	10.4	12.2	3495-00601-1

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
418	16	25	14.03	15	40	53.4	1.24	173.31	5.4		16	25	14	15	40	48	1.196	173.5	1950.20679	1989.26965	12.7	15.2	——
419	16	30	18.67	-12	39	54.5	1.79	164.27	11.8	bcs	16	30	18	-12	39	48	1.175	183.4	1983.49707	1988.52734	9.9	12.2	——
420	16	30	28.46	04	10	41.6	1.46	197.30	9.4	Tcs	16	30	28	04	10	48	1.467	197.3	1950.29712	1993.38989	7.3	7.9	0390-01618-1
421	16	34	20.40	57	09	42.8	1.60	314.95	32.5	d	16	34	17	57	10	0	1.620	316.0	1955.32178	1991.50464	13.2	14.7	——
422	16	34	21.62	57	10	7.1	1.61	315.24	37.3	d	16	34	18	57	10	30	1.620	316.0	1955.32178	1991.50464	15.3	15.7	——
423	16	35	40.39	-30	51	20.3	1.30	199.20	20.8	Bb	16	35	42	-30	51	18	1.189	225.3	1988.28625	1992.27600	12.8	14.1	——
424	16	37	5.68	-01	32	1.6	1.06	217.59	10.3	bm	16	37	5	-01	32	0	1.227	227.0	1980.59119	1988.60657	14.0	15.1	——
425	16	42	4.42	10	25	57.6	1.26	198.56	7.2		16	42	4	10	25	54	1.252	202.1	1955.23413	1992.42969	14.1	15.6	——
426	16	52	58.80	-00	01	35.1	1.64	205.55	5.9	Hcs	16	52	59	-00	01	30	1.673	205.3	1950.46387	1988.44812	6.6	7.6	82588
427	16	55	25.32	-08	19	21.9	1.15	212.12	14.1	Bbd	16	55	26	-08	19	12	1.190	222.5	1984.25330	1988.31152	11.7	13.4	——
428	16	55	28.77	-08	20	11.0	1.21	222.17	6.0	TBbcds	16	55	29	-08	20	6	1.190	222.5	1984.25330	1988.31152	9.2	11.1	5642-01503-1
429	16	55	35.35	-08	23	42.3	1.24	204.67	21.0	Bbd	16	55	34	-08	23	36	1.190	222.5	1984.25330	1988.31152	15.5	17.7	——
430	17	04	22.47	16	55	54.7	1.17	171.19	13.2		17	04	22	16	56	6	1.136	174.5	1950.37915	1989.26147	11.8	13.3	——
431	17	05	03.40	-05	03	59.4	1.46	218.79	51.1	Tbcd	17	05	0	-05	03	54	1.461	219.2	1982.61475	1988.61475	7.9	9.2	5072-00408-1
432	17	05	13.69	-05	05	40.5	1.57	216.86	111.6	bcds	17	05	7	-05	06	30	1.461	219.2	1982.61475	1988.61475	9.7	11.2	——
433	17	12	07.82	45	39	57.8	1.59	170.87	19.5	Tdms	17	12	6	45	39	54	1.572	170.8	1955.22876	1991.45288	9.6	11.2	3501-01952-1
434	17	12	7.91	45	39	59.9	1.60	169.54	20.9	dms	17	12	6	45	39	54	1.572	170.8	1955.22876	1991.45288	9.7	11.3	——
435	17	12	55.09	42	19	54.5	1.08	251.62	1.1	T	17	12	55	42	19	54	1.083	250.1	1954.51587	1992.55518	10.3	11.6	3081-01154-1
436	17	14	8.81	60	47	28.6	0.97	236.41	59.5		17	14	1	60	47	12	1.007	238.4	1955.32178	1993.30530	16.9	18.6	——
437	17	15	20.91	-26	36	7.5	1.23	203.00	7.5	PWdm	17	15	21	-26	36	0	1.232	203.0	1987.65039	——	5.1	6.3	——
438	17	15	20.91	-26	36	8.6	1.23	203.00	2.9	PWdm	17	15	21	-26	36	6	1.232	203.0	1987.65039	——	5.1	6.3	——
439	17	16	13.36	-26	32	46.1	1.22	203.15	6.3	TPW	17	16	13	-26	32	42	1.232	203.0	1987.65039	——	6.5	7.8	6820-00293-1
440	17	18	29.00	-43	25	33.7	1.06	225.30	82.5	P	17	18	35	-43	26	24	1.056	225.3	1987.69702	——	14.0	14.6	——
441	17	18	32.67	32	25	37.3	0.03	62.02	118.2		17	18	40	32	24	24	1.055	173.8	1950.45850	1993.45544	5.2	5.8	——
442	17	18	57.00	-34	59	24.1	1.18	98.30	6.2	PWdm	17	18	57	-34	59	18	1.180	98.3	1988.28906	——	5.8	7.1	——
443	17	18	58.70	-34	59	48.4	1.18	98.30	7.4	PW	17	18	59	-34	59	42	1.180	98.3	1988.28906	——	9.7	11.3	——
444	17	19	03.86	-46	38	10.2	1.06	82.22	18.4	TPWdm	17	19	3	-46	37	54	1.000	77.3	1987.69702	——	5.6	6.5	8341-04366-1
445	17	19	3.71	-46	38	9.4	1.00	77.30	17.1	PWdm	17	19	3	-46	37	54	1.000	77.3	1987.69702	——	8.1	9.6	——
446	17	20	46.43	49	15	19.1	1.34	155.24	4.3		17	20	46	49	15	18	1.304	155.5	1953.52405	1987.31348	14.0	15.6	——
447	17	25	45.23	02	06	41.1	1.32	206.08	7.7	Tcs	17	25	45	02	06	48	1.334	205.8	1981.27051	1992.35083	7.7	9.3	0405-00956-1
448	17	27	40.02	14	29	0.6	1.13	252.00	0.7		17	27	40	14	29	0	1.142	254.4	1952.39709	1992.41626	13.5	15.1	——
449	17	28	39.94	-46	53	42.7	1.05	146.84	25.7	Tb	17	28	41	-46	54	6	1.044	147.0	1987.69702	1992.58191	9.6	11.4	8346-00037-1
450	17	36	25.91	68	20	20.9	1.31	194.16	3.0	Ts	17	36	26	68	20	18	1.311	195.2	1953.43665	1993.62512	9.3	11.1	4428-01943-1
451	17	37	3.00	-44	19	6.0	1.16	216.30	—	NPW	17	37	3	-44	19	6	1.155	216.3	1987.29810	——	11.3	12.8	——
452	17	37	53.35	18	35	30.1	1.35	43.33	5.0	Ts	17	37	53	18	35	30	1.381	42.8	1951.51587	1986.44739	9.7	11.5	1555-01029-1
453	17	39	51.48	51	27	16.0	0.98	300.22	23.2		17	39	49	51	27	18	1.011	301.4	1954.49121	1987.31348	17.5	19.8	——
454	17	46	34.81	-57	19	9.7	1.62	207.28	30.1	b	17	46	33	-57	19	36	1.739	219.2	1987.70239	1991.66577	11.3	12.8	——
455	17	48	8.12	70	52	34.9	1.65	310.64	7.4		17	48	7	70	52	30	1.651	311.0	1953.67163	1993.61157	13.6	14.7	——
456	17	50	55.00	-56	34	54.0	1.26	237.60	—	BNb	17	50	55	-56	34	54	1.256	237.6	1987.70239	1991.66577	12.1	13.6	——
457	18	02	46.26	37	31	3.1	1.15	171.99	4.4		18	02	46	37	31	0	1.158	171.9	1950.60339	1993.60876	14.1	15.8	——
458	18	05	27.37	02	29	59.3	1.13	165.80	8.7	Tdms	18	05	27	02	30	6	1.127	166.6	1953.52686	1988.59021	4.2	5.2	0434-05213-1
459	18	05	27.42	02	29	56.4	1.33	160.57	11.5	Hdms	18	05	27	02	30	6	1.127	166.6	1953.52686	1988.59021	6.2	—	88601B
460	18	17	15.73	68	33	36.5	1.37	352.79	50.7		18	17	13	68	32	48	1.740	203.5	1952.63159	1993.61157	14.6	16.2	——
461	18	18	4.07	38	46	34.2	1.08	201.27	13.2	dm	18	18	3	38	46	30	1.091	197.8	1950.60339	1992.48438	13.8	15.3	——
462	18	18	4.15	38	46	33.8	1.08	200.34	4.2	dm	18	18	4	38	46	30	1.091	197.8	1950.60339	1992.48438	12.2	13.7	——
463	18	20	57.43	-01	02	58.7	0.99	197.79	9.8	b	18	20	57	-01	03	6	1.082	207.9	1981.33337	1986.65479	13.2	14.5	——
464	18	22	6.81	06	20	37.1	1.14	274.77	7.6		18	22	7	06	20	30	1.158	272.7	1950.44189	1993.40100	12.2	13.9	——
465	18	22	27.28	62	03	0.8	1.56	216.11	33.9		18	22	24	62	02	36	1.544	217.1	1952.40247	1994.52393	13.7	15.3	——
466	18	35	43.12	-08	16	6.4	1.25	229.80	5.9	P	18	35	43	-08	16	12	1.251	229.8	1986.65332	——	14.1	15.2	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
467	18	41	36.59	00	55	13.2	2.04	172.21	15.9		18	41	36	00	55	0	1.990	178.6	1980.60779	1990.63062	11.5	12.8	——
468	18	48	44.91	-02	33	46.8	1.43	169.68	13.7	Bb	18	48	44	-02	33	48	1.116	234.9	1986.66699	1987.57812	13.2	14.3	——
469	18	53	39.98	-38	36	45.7	2.07	133.17	25.1	Bb	18	53	42	-38	36	54	1.011	161.1	1987.69446	1989.51233	12.7	13.8	——
470	18	58	00.14	05	54	29.2	1.23	189.14	7.1	Tcs	18	58	0	05	54	36	1.239	189.5	1951.50757	1987.57593	9.4	11.0	0461-00366-1
471	19	07	43.09	32	32	41.8	1.69	48.47	38.4		19	07	42	32	32	6	1.635	48.9	1950.45862	1987.47217	11.6	13.3	——
472	19	12	14.59	02	53	11.1	1.86	106.21	6.2	H	19	12	15	02	53	12	1.853	106.8	1951.64429	1987.57593	11.1	—	94349
473	19	16	55.26	05	10	8.0	1.45	203.39	5.5	Td	19	16	55	05	10	12	1.461	203.1	1950.61169	1992.58533	9.3	11.0	0472-01252-1
474	19	16	57.66	05	09	0.4	1.52	202.91	11.3	d	19	16	57	05	09	6	1.461	203.1	1950.61169	1992.58533	17.9	19.4	——
475	19	20	54.85	-82	33	14.9	1.26	162.48	97.3		19	20	5	-82	33	24	1.261	165.0	1976.57788	1993.76709	12.9	14.4	——
476	19	21	38.79	20	52	2.5	1.75	212.53	10.0		19	21	39	20	52	12	1.751	212.6	1953.62256	1991.52954	13.8	15.1	——
477	19	32	21.59	69	39	40.3	1.84	160.94	2.8	Tcs	19	32	22	69	39	42	1.838	161.2	1954.57324	1991.60071	4.8	5.7	4448-02481-1
478	19	46	45.00	27	07	24.0	1.23	181.50	—	N	19	46	45	27	07	24	1.226	181.5	1950.54065	1996.52832	12.7	14.4	——
479	19	46	48.75	12	04	56.0	1.55	196.99	11.7		19	46	48	12	05	0	1.482	205.1	1953.61438	1991.53235	14.8	15.9	——
480	19	54	0.34	-47	48	39.8	1.13	184.22	43.1		19	54	2	-47	48	0	1.072	186.2	1975.36914	1990.72327	12.2	14.0	——
481	20	03	52.13	23	20	26.5	1.36	227.65	4.0	Tcs	20	03	52	23	20	30	1.368	227.6	1951.53247	1992.71899	7.4	8.3	2141-00881-1
482	20	05	02.67	54	26	3.3	1.47	232.32	6.7	H	20	05	2	54	26	0	1.455	232.7	1952.58020	1989.64160	12.0	—	98906
483	20	05	37.03	-10	55	51.1	6.82	242.49	69.7	Bb	20	05	35	-10	56	54	1.081	94.9	1982.53308	1984.64209	16.4	17.7	——
484	20	05	32.77	-67	19	15.2	1.08	128.56	26.2	Tcs	20	05	37	-67	19	6	1.097	129.1	1979.70520	1995.64929	6.1	6.8	9098-01638-1
485	20	08	43.61	-66	10	55.4	1.66	133.04	12.3	Tcs	20	08	42	-66	10	48	1.651	133.2	1979.70520	1995.64929	3.6	4.5	9098-01918-1
486	20	11	11.94	-36	06	4.3	1.63	163.72	4.4	Tcds	20	11	12	-36	06	0	1.632	163.8	1976.56982	1990.71509	5.4	6.4	7453-01391-1
487	20	11	12.08	-36	06	6.5	1.77	162.84	11.1	dms	20	11	13	-36	06	6	1.632	163.8	1976.56982	1990.71509	11.2	13.0	——
488	20	15	17.39	-27	01	58.7	1.25	98.28	7.0	Tcs	20	15	17	-27	01	54	1.251	98.0	1977.55225	1992.42627	5.8	6.9	6914-01943-1
489	20	19	4.63	12	35	2.2	1.26	181.83	9.5		20	19	4	12	35	0	1.213	184.7	1953.68274	1990.63623	14.8	16.8	——
490	20	23	35.84	-21	22	14.2	1.19	153.03	3.1	Ts	20	23	36	-21	22	12	1.205	152.8	1977.68616	1993.38086	8.7	9.3	6340-00637-1
491	20	27	29.23	35	59	23.4	1.31	228.50	6.1		20	27	29	35	59	18	1.328	228.9	1951.52991	1991.74561	14.3	15.6	——
492	20	27	42.34	-56	27	27.0	1.41	158.81	49.4		20	27	46	-56	26	48	1.283	161.4	1975.36646	1990.69312	12.7	14.2	——
493	20	28	4.17	-76	40	16.4	1.51	149.18	55.6		20	28	4	-76	41	12	1.430	152.9	1975.68347	1992.42346	14.2	15.7	——
494	20	33	40.40	61	45	11.9	1.02	32.17	2.8		20	33	40	61	45	12	1.052	30.5	1952.70813	1991.52698	12.1	14.4	——
495	20	40	33.99	15	29	58.3	1.56	63.43	4.3		20	40	34	15	29	54	1.487	63.3	1953.68274	1990.62805	12.8	14.9	——
496	20	42	18.79	-52	41	58.5	1.06	173.21	32.5	cs	20	42	21	-52	42	24	1.069	176.4	1977.52783	1992.56287	9.8	11.0	——
497	20	42	57.28	-18	55	8.5	1.16	143.81	201.3		20	42	56	-18	51	48	1.016	150.3	1976.70886	1990.72607	10.5	12.0	——
498	20	43	19.41	55	20	52.0	1.91	27.99	4.0		20	43	19	55	20	54	1.915	27.6	1952.71082	1991.67456	14.8	16.4	——
499	20	51	41.97	-79	18	41.1	1.30	143.98	96.8		20	51	54	-79	20	12	1.216	144.6	1976.65991	1992.63660	11.7	13.2	——
500	20	55	37.19	-14	03	55.7	3.31	132.41	3.3	Bbd	20	55	37	-14	03	54	1.486	107.5	1983.76819	1984.58472	13.6	15.2	——
501	20	55	37.81	-14	02	8.8	3.15	128.63	4.0	Bbd	20	55	38	-14	02	6	1.486	107.5	1983.76819	1984.58472	11.8	13.7	——
502	20	56	46.60	-10	26	54.9	1.13	182.10	8.9	Tb	20	56	46	-10	26	54	1.155	182.8	1982.69714	1988.75134	11.7	13.9	5774-01598-1
503	20	57	40.07	-44	07	45.7	1.10	207.88	12.1	Tcs	20	57	39	-44	07	42	1.098	208.5	1976.70618	1990.78076	6.6	7.2	7976-01340-1
504	21	05	14.09	-24	46	52.6	1.14	197.24	1.9	gm	21	05	14	-24	46	54	1.091	198.4	1976.41187	1994.50134	17.1	18.8	——
505	21	11	57.97	-31	03	17.5	1.15	126.24	0.6		21	11	58	-31	03	18	1.060	125.0	1974.45947	1989.75610	15.1	16.4	——
506	21	13	34.09	-19	19	46.3	1.12	192.60	13.0	T	21	13	35	-19	19	48	1.112	192.2	1977.54968	1991.74243	11.6	14.3	6355-01470-1
507	21	21	34.94	-19	03	40.0	1.08	208.61	13.9		21	21	34	-19	03	36	1.064	213.4	1977.54968	1991.74243	14.5	16.4	——
508	21	29	36.81	17	38	35.8	1.08	69.58	11.6	T	21	29	36	17	38	36	1.058	69.8	1954.52161	1991.52979	10.5	11.8	1668-00637-1
509	21	30	02.75	-12	30	36.3	1.05	104.27	3.7	Tbcs	21	30	3	-12	30	36	1.056	104.4	1981.74377	1986.75073	9.3	10.8	5794-00888-1
510	21	30	47.74	-40	42	31.3	1.83	143.53	54.6		21	30	49	-40	43	24	1.730	143.7	1974.63440	1990.71777	12.9	14.4	——
511	21	31	18.59	-09	47	26.4	1.16	92.67	7.0	Hb	21	31	19	-09	47	30	1.194	90.8	1981.74109	1988.77051	11.9	—	106255
512	21	38	43.71	-33	39	55.0	1.17	113.69	25.0		21	38	42	-33	39	42	1.190	116.5	1979.63171	1994.81091	12.1	13.6	——
513	21	39	1.14	-24	09	30.9	1.43	126.03	5.4	b	21	39	1	-24	09	36	1.208	124.4	1983.44580	1991.59448	12.7	14.4	——
514	21	40	53.39	78	49	20.6	1.16	64.36	15.4		21	40	49	78	49	12	1.147	63.0	1954.74854	1993.56250	14.2	15.3	——
515	21	55	47.95	-11	21	42.1	1.09	120.10	0.7	P	21	55	48	-11	21	42	1.088	120.1	1979.72192	——	16.9	19.4	——

Table 2—Continued

	New data										Luyten's original data								Epoch				
LHS No.	RA (J2000.0)[a]			Dec (J2000.0)[a]			μ[b]	θ[b]	Dist.[c]	Com.[d]	RA (J2000.0)			Dec (J2000.0)			μ	θ	POSS I	POSS II	m_{red}[e]	m_{blue}[e]	Tycho-2/HIP[f]
516	21	56	55.44	-01	54	11.1	1.52	69.67	9.8	b	21	56	56	-01	54	6	1.426	64.2	1981.71912	1989.66028	14.0	15.3	——
517	22	09	40.35	-04	38	26.6	1.14	91.10	26.4	Tbcs	22	09	42	-04	38	36	1.037	91.5	1982.77930	1991.67126	10.5	11.9	5227-01521-1
518	22	20	26.99	-24	21	48.9	1.05	154.50	13.8	P	22	20	28	-24	21	48	1.055	154.5	1980.47742	——	12.7	14.0	——
519	22	22	35.86	-50	48	26.9	1.07	171.29	17.9	Tcs	22	22	34	-50	48	24	1.080	176.8	1980.77173	1995.64661	8.8	9.8	8445-01479-1
520	22	24	36.89	-72	15	19.5	1.47	117.24	16.9	Ts	22	24	34	-72	15	30	1.470	117.4	1977.78186	1996.77319	5.4	6.0	9340-02962-1
521	22	27	59.21	-30	09	34.5	1.06	138.75	5.2		22	27	59	-30	09	30	1.012	136.7	1977.62891	1995.77808	13.9	15.7	——
522	22	28	49.12	05	48	13.2	1.67	161.16	17.3		22	28	48	05	48	18	1.638	162.4	1954.57922	1990.62830	13.5	14.8	——
523	22	28	54.59	-13	25	21.4	1.14	185.62	9.3	b	22	28	54	-13	25	18	1.083	196.5	1982.53882	1989.66028	16.1	18.3	——
524	22	29	49.12	41	28	47.5	1.29	70.95	6.6		22	29	49	41	28	54	1.293	68.5	1952.55298	1989.67188	12.8	14.7	——
525	22	32	56.96	53	47	40.4	1.43	86.04	17.9		22	32	55	53	47	36	1.318	86.1	1952.70007	1990.64478	10.6	12.2	——
526	22	34	53.76	-01	04	59.0	1.14	79.91	3.8		22	34	54	-01	05	0	1.135	78.3	1951.68848	1995.58716	14.0	15.7	——
527	22	41	41.07	-32	58	49.0	1.21	105.75	5.1		22	41	41	-32	58	54	1.124	105.0	1984.63818	1996.60925	17.0	—	——
528	22	42	38.87	17	40	8.3	1.26	66.99	12.9		22	42	38	17	40	12	1.240	63.9	1953.76770	1991.70215	11.2	12.9	——
529	22	51	23.14	29	39	42.5	1.30	86.27	1.9		22	51	23	29	39	42	1.269	83.2	1954.60095	1989.52991	15.5	16.0	——
530	22	53	16.81	-14	15	52.0	1.37	126.71	17.8	bcs	22	53	18	-14	15	48	1.143	123.5	1983.76306	1989.82190	10.8	12.4	——
531	22	55	45.01	-75	27	34.2	1.64	223.46	22.5		22	55	46	-75	27	12	1.420	225.6	1977.76562	1993.76709	11.6	12.7	——
532	22	56	24.97	-60	03	50.4	1.10	203.38	55.3		22	56	28	-60	03	0	1.060	209.0	1980.77454	1995.65479	13.9	15.4	——
533	22	56	34.80	16	33	12.3	1.07	254.62	2.9	Ts	22	56	35	16	33	12	1.051	252.2	1954.58459	1990.70483	8.9	10.5	1711-02453-1
534	23	06	36.12	71	43	24.6	1.36	72.82	6.6		23	06	36	71	43	18	1.320	71.5	1952.63477	1992.59668	11.9	13.4	——
535	23	07	30.16	68	40	4.7	1.16	87.31	4.8		23	07	30	68	40	0	1.125	88.5	1952.62939	1992.59668	12.4	13.9	——
536	23	08	26.14	31	40	22.5	1.52	78.50	15.3		23	08	25	31	40	18	1.390	77.2	1954.65576	1989.52991	14.7	16.0	——
537	23	09	33.26	00	42	39.9	1.27	176.50	4.4	b	23	09	33	00	42	42	1.301	192.2	1983.53345	1990.77869	9.8	10.6	——
538	23	10	42.18	-19	13	36.3	1.52	176.93	36.4		23	10	42	-19	13	0	1.421	178.4	1977.76843	1991.74524	11.8	13.6	——
539	23	15	51.64	-37	33	30.9	1.41	78.18	19.5		23	15	50	-37	33	30	1.306	78.2	1976.50208	1996.75684	14.8	—	——
540	23	17	4.96	-13	51	4.2	1.28	204.20	1.9	PWd	23	17	5	-13	51	6	1.282	204.2	1982.85046	——	8.1	8.5	——
541	23	17	5.00	-13	51	4.1	1.28	204.20	37.0	PWd	23	17	6	-13	50	30	1.282	204.2	1982.85046	——	14.8	16.8	——
542	23	19	9.63	-06	12	51.4	1.74	195.45	6.5	c	23	19	10	-06	12	48	1.728	201.7	1982.84497	1988.83606	17.6	18.9	——
543	23	21	37.46	17	17	25.4	1.49	201.17	7.9	H	23	21	38	17	17	24	1.483	201.0	1951.61475	1990.81152	11.7	—	115332
543a	23	25	39.59	53	08	5.9	0.94	70.08	21.7	m	23	25	42	53	08	6	1.071	71.2	1952.70837	1990.78955	14.5	16.2	——
544	23	30	23.00	59	09	54.0	1.10	84.30	—	N	23	30	23	59	09	54	1.104	84.3	1954.60120	1991.60107	6.6	7.8	——
545	23	34	3.75	00	10	48.1	0.96	219.20	26.6	b	23	34	3	00	10	24	1.388	227.8	1982.84766	1987.72961	11.0	12.6	——
546	23	35	10.54	-02	23	22.9	1.28	138.41	8.2		23	35	10	-02	23	24	1.157	137.4	1983.54175	1989.83289	14.1	15.7	——
547	23	36	52.60	-36	28	54.2	1.48	91.71	19.3		23	36	51	-36	28	54	1.155	87.9	1985.54980	1996.71313	13.4	15.2	——
548	23	36	52.05	01	09	53.3	1.45	89.44	1.0	b	23	36	52	01	09	54	1.205	94.9	1982.84766	1987.72961	12.5	14.2	——
549	23	41	55.17	44	10	38.0	1.62	175.17	2.7		23	41	55	44	10	36	1.617	177.0	1952.63220	1990.63940	12.7	14.5	——
550	23	49	12.58	02	24	2.0	1.44	134.45	24.1	cs	23	49	11	02	24	6	1.374	134.5	1951.90991	1987.72961	8.8	10.4	——
551	23	57	44.23	23	18	15.7	1.52	135.35	3.9		23	57	44	23	18	18	1.460	135.0	1953.60938	1990.66125	11.0	12.3	——
552	23	59	27.89	-16	56	40.9	1.13	92.54	12.8	Ts	23	59	27	-16	56	42	1.162	93.0	1983.53906	1995.65759	9.0	9.9	6405-00775-1

[a]Equatorial coordinates for epoch and equinox 2000.0 using our astrometry and proper motion measurements. If none of the digital scans of POSS plates were available, or the difference between the epochs was not sufficient, proper motions from Luyten were accepted. If star was not found, both coordinates and proper motions were taken from Luyten.

[b]θ is in degrees, μ is in $''/yr$.

[c]Distance between predicted J2000.0 position of LHS and our measurements. If coordinates of the LHS Catalogue were accepted, the distance is flagged as a "--" dash.

[d]Comments are the following: 1 – POSS I DSS image has poor quality, 2 – POSS II DSS image has poor quality, B – position shift between the two frames is less than $5''$, proper motion data from LHS Catalogue is taken, H – coordinates, proper motion and magnitudes are from the Tycho-2 Supplement-1 catalogue, ie. from the Hipparcos catalogue, N – star was not found in *manual* search, P – POSS II DSS frame was not available, W – finder chart would have been needed for *manual* identification, but was not available, T – coordinates, proper motion and magnitudes are from the Tycho-2 catalogue, b – for some reason our proper motion measurement is not accurate, Luyten's data is used, c – refitting of position was done (due to saturation or merging), d – double star, or companion of a binary, m – merging, i – identification dubious, s – saturated on at least one of the frames

[e]Red and blue magnitudes are Tycho (Hipparcos) V and B if star was found in the Tycho-2 (Supplement-1) catalogue, otherwise LHS red and photographic magnitudes.

[f]Identification of Tycho-2 catalogue is of the format "tyc1-tyc2-tyc3", while Hipparcos is the single Hipparcos number followed by the CCDM component identifier (Dommanget & Nys 1994).

Note. — Table with refined positions for Luyten stars. The printed version of the paper contains only the high proper motion subset ($\mu > 1''$ yr^{-1}) of the revised LHS Catalogue. The electronic version of the paper contains the unabridged version of the catalogue, which can also be retrieved from and http://www.archive.stsci.edu/~ksahu/lhs