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THE SOLAR NEIGHBORHOOD. V. *VRI* PHOTOMETRY OF SOUTHERN NEARBY STAR CANDIDATES

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ABSTRACT

Cousins (*V*)*RI* photometry is presented for 73 nearby star candidates in the Southern Hemisphere, mostly high proper motion stars. Included are 37 stars from the lists of Wroblewski & Torres of faint high proper motion stars, for which there was no previous color information. Almost all of the stars appear to be M dwarfs or subdwarfs, several of which are probably closer than 10 pc.

Key words: astrometry — stars: distances — stars: fundamental parameters — stars: late-type — stars: low-mass, brown dwarfs

1. INTRODUCTION

The sample of nearby M dwarfs is known to be woefully incomplete out to 8 pc, even if it is assumed to be complete out to 5 pc (Henry, Kirkpatrick, & Simons 1994). Because M dwarfs are by far the most common type of star, the identification of more of these stars in the solar neighborhood toward completing the sample has long been seen as necessary.

Because of the large investment of time and effort needed to obtain a distance through trigonometric parallax, it is highly desirable to produce a list of *probable* nearby stars from the large number of *possible* candidates that arise from proper-motion surveys. Weis (1984, 1986) has obtained *VRI* photometry for northern color class m stars from the NLTT Catalogue (Luyten 1979a) in order to derive photometric parallaxes for these stars, and we have undertaken a similar, if more limited, program in the Southern Hemisphere, to provide candidates for our CCD parallax program (Ianna 1993).

We have selected southern NLTT stars (Luyten 1980) with large reduced proper motions by observing stars with a Palomar *R* magnitude fainter than 16, and with proper motions between 0″.4 and 0″.5 yr^{-1}. In addition to the NLTT stars, a fainter proper-motion survey with limited areal coverage has been undertaken in the Southern Hemisphere by Wroblewski & Torres (1989, 1991, 1994, 1996, 1997), with a limiting proper motion of $\mu \sim 0''.15$ yr^{-1} and $11.0 < m_{pg} < 18.0$. No color information exists for these stars, and we have undertaken a program to obtain (*V*)*RI* photometry for those stars with $\mu \gtrsim 0''.5$ yr^{-1} initially, with the intention of extending to smaller proper motions in the future.

In this paper, we present the photometry from these samples. As well, we include photometry for additional stars already on the parallax program (including one Northern Hemisphere star, LHS 2565), many of which lie within 10 pc. This is part of an effort by the Research Consortium on Nearby Stars (RECONS; Henry et al. 1997) to fill in the census of nearby stars and to ensure that complete and uniform data are available for all members. Parallel efforts are underway to provide spectral types, *JHK* photometry, and CCD parallaxes.

2. OBSERVATIONS

The stars were observed on 21 photometric nights over the course of six observing runs, spanning 2 years at Siding Spring Observatory with the 40 inch (1 m) (f/8) telescope. The detector was an EEV 2186 × 1152 CCD (22.5 μm pixels, yielding a scale of 0″.58 pixel^{-1}), which was formatted to a 700 × 700 pixel size, yielding a field of 6′.8 × 6′.8. The chip was run by an Astromed 3200 controller, initially through Astromed software but subsequently using the CICADA control system (Young et al. 1997), which (among other improvements) provided the ability to set up an overscan region on the chip.

Standards from Landolt (1992), Bessell (1990), and Menzies et al. (1989) were observed in order to obtain extinction coefficients for each run and transformation equations for each night. The standards' magnitudes and colors in Landolt (1992) were transformed to the Cousins system as described by Bessell (1995), except in the cases of the reddest stars. Bessell had corrected his red star photometry onto that of Laing (1989), thinking that it would have been the SAAO system, but in fact Kilkenny et al. (1997) have shown that the Bessell (1990) *VRI* system is on the SAAO (Cousins) system and needs no correction. We have therefore transformed the Landolt standards using the coefficients in Table 1 of Bessell (1995) and then back-transformed using the equations in § 3.1 of Bessell (1995, p. 673) to recover the original Cousins/Bessell system for the reddest stars.

Only standard stars with $(V - I)_C \gtrsim 1.8$ were used in the reductions, because there is a break in the linearity of the transformation relations at about this point (Menzies 1993) and we were only interested in accurate magnitudes for red stars. Only three of the candidates that we observed turned out to have $(V - I)_C < 1.55$ [or $(R - I)_C < 0.70$]. On many nights, a large number of bluer standards were also observed (although not on the nights the three bluest candidates were observed), so it was possible to estimate the size of the error introduced by only using red standards. When blue standards (with colors close to those of these three candidates) were reduced as unknowns based on fits from the red standards on the same night, the magnitudes and colors differed by about 0.03 mag from the values obtained when fitting to the blue stars themselves. This is of the order of the internal and external errors expected (see § 3).

The data reduction, including overscan correction (for the CICADA runs), bias subtraction and flat-fielding, was

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performed using the IRAF[2] CCDRED package. Instrumental magnitudes were obtained using the IRAF APPHOT package. IRAF/DAOPHOT was used to check results in moderately crowded standard fields; no significant difference was found. The IRAF PHOTCAL package was then used to perform fits to the extinction and transformation equations and to transform the magnitudes to the standard Cousins system. The extinction was fitted without a color-dependent term, following Menzies (1993), who only used a color term for the B extinction.

These magnitudes and colors are listed in Table 1. The first column gives the name of the star, followed by the J2000.0 coordinates in columns (2) and (3). The proper motion and position angle are given in columns (4) and (5). These values are from Wroblewski & Torres for the WT stars, Luyten (1979b) for the LHS stars, Luyten (1980) for the LP stars, Ruiz & Takamiya (1995) for ESO 207-98, Ianna (1993) for the HB stars, and Giclas, Burnham, & Thomas (1978) for GJ 1284. Columns (6) and (7) give the V and R magnitudes, followed by the $V-R$, $R-I$, and $V-I$ colors, all on the Cousins system, in columns (8), (9), and (10). Column (11) contains the absolute I magnitude. In column (12) we list the photometric distance, and finally the photometric tangential velocity is given in column (13), both described below.

Figure 1 is a $(V-R)$-$(R-I)$ color-color diagram for those stars in Table 1 with both $V-R$ and $R-I$ colors. The error bars (see following section) are not plotted, for simplicity. Also plotted are the stars from Bessell (1990, 1991). Clearly, these stars all lie along the same sequence, with a few obvious binaries lying above the sequence, including WT 538 from our data. There are also three stars that lie below the sequence (WT 590 and, to a greater extent, WT 460 and LHS 1445, from Bessell 1991). The cause of this offset is unclear.

In order to derive photometric parallaxes for these stars based on the $R-I$ colors, we used the list in Weis (1986) of photometry of stars with trigonometric parallaxes (taken from van Altena, Lee, & Hoffleit 1995), converted to the

[2] IRAF is distributed by the National Optical Astronomy Observatories, which are operated by the Association of Universities for Research in Astronomy, Inc., under cooperative agreement with the National Science Foundation.

TABLE 1

VRI PHOTOMETRY

Name (1)	R.A. (J2000.0) (2)	Decl. (J2000.0) (3)	μ (arcsec yr^{-1}) (4)	θ (deg) (5)	V (mag) (6)	R (mag) (7)	$V-R$ (mag) (8)	$R-I$ (mag) (9)	$V-I$ (mag) (10)	M_I (mag) (11)	$d_{\rm phot}$ (pc) (12)	$v_{T,{\rm phot}}$ (km s^{-1}) (13)
LHS 1047	00 15 28.0	−16 08 00	0.863	133.6	11.50	10.26	1.25	1.57	2.82	9.22	8	32
WT 4	00 16 35.3	−41 49 23	0.534	132.6	15.96	15.03	0.92	0.99	1.92	7.54	200	506
LHS 1070	00 24 41.0	−27 08 54	0.614	354.9	…	13.58	…	2.18	…	12.35	6	19
LP 937-40	00 27 54.0	−36 33 13	0.402	146.0	17.67	16.23	1.44	1.85	3.29	10.45	61	116
WT 31	01 18 35.8	−59 38 00	0.533	96.8	15.04	13.93	1.11	1.39	2.50	8.56	63	159
SERC 296A[a]	01 24 51.0	−38 44 40	…	…	…	16.86	…	2.07	…	11.68	42	…
LHS 148	01 53 10.0	−33 25 00	1.119	84.4	16.42	15.49	0.93	0.92	1.85	7.42	270	1432
WT 84	02 17 27.9	−59 22 43	0.559	212.6	15.88	14.29	1.59	2.01	3.60	11.34	15	41
CD −44°836[b]	02 43 19.0	−43 56 48	0.405	170.0	…	16.58	…	0.56	…	7.09	611	1173
LP 993-116[b]	02 43 20.0	−43 57 30	0.405	170.0	…	18.92	…	0.92	…	7.42	1301	2497
LHS 1723	05 01 58.0	−06 56 54	0.773	224.9	12.16	10.85	1.31	1.65	2.96	9.56	9	31
ESO 207-98[c]	06 54 19.0	−49 56 48	0.670	170.0	…	14.59	…	1.73	…	9.90	39	125
WT 207	07 02 36.6	−40 06 29	0.624	105.3	15.08	13.91	1.17	1.60	2.77	9.34	39	116
WT 214	07 28 40.1	−61 20 41	0.626	319.5	16.06	14.80	1.26	1.63	2.89	9.46	55	164
LHS 2106	09 07 03.0	−22 08 30	0.513	215.9	14.19	12.87	1.32	1.73	3.05	9.88	18	43
WT 244	09 44 28.6	−73 58 39	0.524	256.9	15.24	13.85	1.39	1.78	3.17	10.13	24	61
WT 248	10 05 54.9	−67 21 31	1.197	264.5	14.51	13.43	1.08	1.41	2.49	8.63	48	270
WT 287	10 26 21.2	−38 30 40	0.511	231.2	…	15.61	…	0.29	…	7.16	428	1036
WT 1827	10 43 02.8	−09 12 41	1.971	280.6	15.06	13.54	1.52	1.95	3.46	10.98	13	124
LHS 292	10 48 13.0	−11 20 12	1.644	158.5	…	13.61	…	2.38	…	13.65	3	26
LHS 2520	12 10 06.0	−15 04 18	0.720	184.0	12.12	10.91	1.21	1.59	2.81	9.32	10	34
WT 320	12 12 54.4	−41 59 32	0.507	239.4	…	17.07	…	1.06	…	7.67	466	1120
WT 330	12 27 54.2	−42 04 37	0.785	267.0	14.25	13.40	0.85	0.85	1.70	7.31	112	416
LHS 2565	12 28 59.0	+08 25 30	0.700	245.7	12.06	10.87	1.19	1.54	2.72	9.08	11	37
LHS 337	12 38 49.0	−38 22 24	1.487	207.2	12.78	11.48	1.30	1.73	3.03	9.90	9	66
WT 392[d]	13 13 09.4	−41 30 40	0.991	269.0	12.88	11.66	1.26	1.64	2.90	9.51	13	59
LHS 2704	13 15 17.0	−73 08 00	0.500	249.7	13.11	11.99	1.12	1.41	2.52	8.61	25	59
WT 426	13 31 01.6	−45 35 09	0.636	289.2	13.47	12.34	1.13	1.44	2.57	8.73	27	82
WT 444	13 42 20.6	−46 48 03	0.496	248.7	16.43	15.54	0.89	0.99	1.81	7.54	252	593
LP 856-23	13 58 10.0	−24 12 40	0.462	252.0	17.98	16.53	1.46	1.81	3.26	10.25	78	171
WT 460	14 12 00.0	−41 32 22	0.770	260.3	15.39	13.89	1.50	2.07	3.56	11.65	11	39
LHS 2906	14 23 08.0	−22 17 12	0.536	210.2	15.02	13.73	1.29	1.67	2.96	9.64	31	78
LHS 375	14 31 38.0	−25 25 30	1.386	268.6	15.58	14.58	1.00	1.15	2.15	7.88	128	842
WT 493	14 41 51.5	−42 59 17	0.544	239.8	14.25	13.07	1.18	1.52	2.70	9.02	32	83
LP 915-31	15 24 54.0	−31 43 01	0.399	254.0	18.25	16.75	1.50	1.92	3.42	10.84	63	119
LHS 3109	15 43 21.0	−30 55 54	0.504	226.5	13.09	12.02	1.07	1.31	2.39	8.32	30	72
LP 860-47	15 54 29.0	−24 24 58	0.361	225.0	…	16.37	…	1.87	…	10.57	61	104
LHS 3218	16 35 25.0	−27 18 12	0.924	179.7	14.19	12.93	1.26	1.63	2.89	9.45	24	103
LP 686-39	17 01 43.0	−08 06 24	0.459	202.0	…	16.45	…	1.35	…	8.43	216	470
WT 538[e]	17 06 52.0	−64 23 14	0.667	222.0	15.54	14.56	1.00	0.97	1.99	7.49	166	524
LHS 456	17 50 55.0	−56 34 54	1.256	237.6	12.08	11.13	0.94	1.05	1.99	7.65	31	183
WT 562	18 26 19.8	−65 47 41	0.592	180.0	15.32	13.91	1.42	1.75	3.18	10.01	27	76

TABLE 1—*Continued*

Name (1)	R.A. (J2000.0) (2)	Decl. (J2000.0) (3)	μ (arcsec yr^{-1}) (4)	θ (deg) (5)	V (mag) (6)	R (mag) (7)	$V-R$ (mag) (8)	$R-I$ (mag) (9)	$V-I$ (mag) (10)	M_I (mag) (11)	$d_{\rm phot}$ (pc) (12)	$v_{T,\rm phot}$ (km s^{-1}) (13)
WT 590	18 45 17.3	−55 33 23	0.656	173.5	15.49	14.48	1.01	1.37	2.38	8.51	83	259
WT 598[f]	18 51 32.0	−59 16 47	0.512	163.3	13.62	12.91	0.71	0.60	1.32	7.10	110	266
WT 665	19 54 14.9	−70 42 55	0.439	179.4	14.98	13.85	1.13	1.45	2.58	8.77	53	111
LP 870-14	19 54 42.0	−20 57 41	0.402	220.0	...	19.50	...	2.04	...	11.49	156	298
WT 686	20 11 38.3	−55 27 45	0.400	168.4	16.49	15.60	0.89	0.82	1.71	7.28	315	598
WT 697	20 19 25.5	−69 14 07	0.649	165.7	15.44	14.53	0.91	1.03	1.94	7.61	150	462
WT 708	20 27 04.5	−68 41 07	0.501	114.6	17.20	15.71	1.49	1.85	3.34	10.46	48	114
WT 737	20 46 28.1	−49 51 04	0.548	155.8	15.30	14.09	1.22	1.56	2.78	9.20	46	120
WT 772	21 02 13.0	−47 08 05	0.585	153.8	15.79	14.45	1.35	1.68	3.03	9.69	41	114
HB 2115−4518[g]	21 18 30.0	−45 05 45	0.620[h]	139.0[h]	...	18.71	...	2.50	...	14.53	22	65
HB 2124−4228[g]	21 27 26.0	−42 15 15	0.190[h]	136.0[h]	...	18.52	...	2.40	...	13.79	29	26
WT 792	21 34 22.3	−43 16 11	0.785	169.4	16.23	14.70	1.53	1.95	3.48	11.00	22	83
WT 795	21 36 25.3	−44 01 00	0.816	143.3	14.15	12.83	1.32	1.73	3.05	9.91	17	67
WT 804	21 40 01.6	−43 43 16	0.837	168.2	15.35	14.20	1.15	1.53	2.69	9.08	52	207
WT 812	21 45 58.7	−40 51 05	0.770	160.7	17.50	16.32	1.18	1.56	2.74	9.17	131	479
LP 1032-26	21 54 28.0	−43 06 58	0.425	192.0	...	16.34	...	1.62	...	9.41	116	234
WT 855	22 01 31.6	−45 07 39	0.591	177.5	15.84	14.70	1.14	1.52	2.65	9.01	68	191
LHS 3746	22 02 30.0	−37 05 00	0.836	105.6	11.76	10.57	1.19	1.52	2.71	9.02	10	40
WT 870	22 06 40.7	−44 58 08	0.752	217.8	14.42	13.10	1.32	1.67	2.99	9.65	23	81
WT 873	22 09 41.0	−56 21 37	0.642	109.8	14.86	14.05	0.81	0.78	1.60	7.24	160	488
WT 918	22 21 37.0	−65 47 31	0.696	95.8	16.39	14.99	1.31	1.64	2.95	9.49	59	195
LHS 3836	22 37 59.0	−65 49 00	0.711	119.5	14.36	13.18	1.17	1.56	2.74	9.20	31	103
LHS 532	22 56 28.0	−60 03 00	1.060	209.0	14.01	12.60	1.40	1.79	3.19	10.19	13	67
LP 877-10	23 04 34.0	−24 55 35	0.419	93.0	...	16.92	...	2.07	...	11.64	44	87
WT 1000	23 30 24.0	−55 42 40	0.599	193.8	14.75	13.91	0.84	0.73	1.57	7.18	159	450
GJ 1284	23 30 12.0	−20 23 18	0.361	123.0	11.12	10.01	1.11	1.41	2.51	8.62	10	17
WT 1007[i]	23 36 03.7	−43 29 14	0.769	204.6	14.58	13.75	0.85	0.81	1.65	7.27	137	498
LHS 4009	23 45 32.0	−16 10 24	0.684	215.3	14.43	12.93	1.50	1.91	3.41	10.78	11	36
WT 1026	23 46 35.2	−52 47 01	0.729	184.3	14.77	13.77	1.00	1.17	2.17	7.92	87	299
LP 936-10	23 52 49.0	−36 32 20	0.459	202.0	...	17.23	...	1.09	...	7.75	476	1035
LHS 4058	23 59 51.0	−34 06 42	0.952	131.1	12.83	11.61	1.22	1.54	2.77	9.11	16	70

NOTE.—Units of right ascension are hours, minutes, and seconds, and units of declination are degrees, arcminutes, and arcseconds.
[a] Thackrah, Jones, & Hawkins 1997.
[b] Common proper motion pair in Luyten 1980, position angle and separation listed as (62°, 44″); actually (164°, 42″).
[c] Ruiz & Takamiya 1995.
[d] ER 2 (Ruiz & Maza 1987).
[e] Photometry possibly affected by faint companion at (114°, 5″).
[f] Ci 20 1110.
[g] Hawkins & Bessell 1988.
[h] Relative proper motions from Ianna 1993. Note that α and δ are switched for these stars in Table 1 of Ianna 1993, and θ for HB 2115−4518 is misprinted.
[i] LHS 3983.

Cousins system as specified in Weis (1996). We found the following polynomial fit to the M_I-$(R-I)$ relation:

$$M_I = 7.532 - 1.822(R-I) + 1.845(R-I)^2 \quad (0.90 < R-I < 2.3) \; ;$$

we then used this fit to obtain a photometric distance for each star in Table 1.

These distances all depend on the assumption that the stars are single dwarfs that fall along the M_I-$(R-I)$ main sequence, and not unresolved binaries or subdwarfs. In Table 1, we list the tangential velocity implied by the photometric distance, $v_{T,\rm phot} = 4.74\mu d_{\rm phot}$, to help differentiate between likely subdwarfs and dwarfs. As discussed by Weis (1984), stars that lie above the main sequence (i.e., binaries) will have photometric distances and tangential velocities that are smaller than the true values, while for stars that fall below the main sequence (i.e., subdwarfs), the reverse will be true. Those stars with values of $v_T > 200$ km s^{-1} are almost certainly subdwarfs with true distances that are much smaller than the $d_{\rm phot}$ in Table 1.

3. INTERNAL AND EXTERNAL ERRORS

While 46 of the stars have only single observations, we performed repeat observations in VRI for 14 of the stars listed in Table 1. From these we are able to estimate the internal errors: $\sigma_{\rm int}(V) \sim \pm 0.02$ mag, $\sigma_{\rm int}(V-R) \sim \pm 0.02$ mag, $\sigma_{\rm int}(R-I) \sim \pm 0.03$ mag, and $\sigma_{\rm int}(V-I) \sim \pm 0.03$ mag. In addition, there are 12 additional stars that have repeat observations in R and I only; the internal errors for the 26 stars with R and I repeats are about the same size as the errors listed above for the 14 stars. The errors from the fits for the coefficients of the extinction and transformation (slope and zero point) equations were of the same order ($\sigma \sim \pm 0.02$ mag).

Previous photoelectric photometry for stars in our sample is available from three sources. Eggen (1979, 1980, 1987) presents extensive lists of VRI photometry that are (essentially) on the Johnson V and Kron RI systems, and which can be transformed to the Cousins system using the relations given by Bessell (1979, 1983). However, these transformations only apply to stars with $0.35 < (R-I)_{\rm C} < 1.3$ because of the lack of redder standards. Therefore, while Eggen's lists contain 14 of the stars presented here, only one of them is blue enough to allow the photometry to be accurately transformed in order to allow a comparison, and this star (LHS 3983 = WT 1007) has a V magnitude in Eggen that is only given to 0.1 mag. If we include those stars with

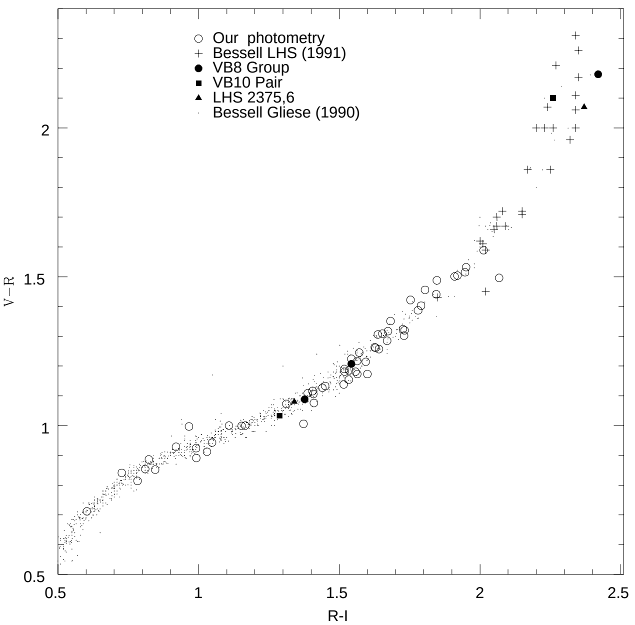

FIG. 1.—Color-color diagram of southern nearby star candidates. $R-I$ is plotted vs. $V-R$ for the stars presented in this paper (*open circles*). The stars lie along the main sequence as defined by photometry from Bessell (1990, 1991). The estimated errors in the colors are typically ± 0.03 mag (see text).

TABLE 2

COMPARISON OF TRIGONOMETRIC AND PHOTOMETRIC DISTANCES

Name	D_{trig} (pc)	D_{phot} (pc)	Reference
LHS 1047	5.5 ± 0.2	8	GCTP[a] 40.01
LHS 1047	5.2 ± 0.5	8	HIP[b] 1242
LHS 1070	7.4 ± 0.7	6	GCTP 66.01
LHS 292..............	4.5 ± 0.1	3	GCTP 2516.02
LHS 2565	13.9 ± 1.2	11	GCTP 2877
LHS 2565	13.6 ± 0.7	11	HIP 60910
LHS 375[c]	24.0 ± 0.6	128	GCTP 3289.01
LHS 456..............	25.5 ± 8.2	31	GCTP 4059.03
HB 2115−4518[d]......	23.6 ± 2.0	22	GCTP 5120.11
HB 2124−4228[d]......	29.8 ± 5.0	29	GCTP 5160.01
GJ 1284	14.8 ± 1.7	10	HIP 116003

[a] Van Altena et al. 1995.
[b] *Hipparcos* Catalogue (ESA 1997).
[c] Subdwarf (Ruiz & Anguita 1993).
[d] Parallax entries for these two stars are reversed in van Altena et al. 1995.

V photometry given to a precision of 0.01 mag, and allow some extrapolation when using the color transformation equations [taking $(V-I)_K < 1.3$ instead of $(V-I)_C < 1.3$], we have four stars in common (LHS 2520, 2704, 3746, and 1047). There are four additional stars with imprecise V magnitudes but with more precise $R-I$ photometry (LHS 3109, 3836, 3983, and 4058).

Weis (1996) presents photometry for three additional stars listed here (LHS 1723, 292, and 4009), and his values can be transformed from the Kron to the Cousins system using the linear relations that he gives. Photometry for two stars (LHS 292 and LHS 1070) is available from Bessell (1991), and one (LHS 2565) from Bessell (1990). When comparing our data with the Cousins photometry for the 10 observations of nine stars with precise VRI data from these sources, we find no systematic difference in either magnitude or colors, and dispersions of $\sigma_{ext}(V) \sim \pm 0.04$ mag, $\sigma_{ext}(V-R) \sim \pm 0.07$ mag, $\sigma_{ext}(R-I) \sim \pm 0.02$ mag, and $\sigma_{ext}(V-I) \sim \pm 0.06$ mag. If we include the four stars from Eggen with uncertain V magnitudes, we again find no systematic differences, and $\sigma_{ext}(R-I) \sim \pm 0.04$ mag. There was no significant difference found when comparing the data individually from the three different sources.

Ruiz & Anguita (1993) report $BVRI$ photometry for four subdwarfs, including LHS 375, which differs by about 0.1 mag in V from our data for LHS 375, although the colors are in better agreement. It should be noted, however, that they used the E-region standards from Graham (1982), which only has four stars redder than $V-I = 1.8$ and only one star, the suspected variable E7-64 (Menzies et al. 1989), that is redder than $V-I = 2.0$. It is worth reiterating the point of several previous authors: it is vital that the colors of the standards observed span the color range of the program stars. A further caveat applies to photometric observations of M dwarf stars: as many different standards as possible in this color range should be observed, because many of these "standards" are flare stars and exhibit some degree of variability.

4. DISCUSSION

We have presented VRI photometry for 73 stars, 55 with no prior published data in any standard system, and photometric parallaxes for the stars based on their $R-I$ colors. Of the 37 Wroblewski & Torres stars we have observed, eight are estimated to be within 25 pc and so are new candidates for the Catalogue of Nearby Stars (Gliese & Jahreiss 1988). Of the remaining 36 stars, 16 are also likely to be nearby, having photometric distances from our data of 25 pc or less.

There are published trigonometric parallaxes (from van Altena et al. 1995 and from the *Hipparcos* Catalogue, ESA 1997) for nine of the stars in Table 1 with which the photometric distance estimates may be compared. The measured and photometric distances for these stars are listed in Table 2. As can be seen from the table, these distances are in good agreement, with the exception of the underluminous subdwarf LHS 375 (Ruiz & Anguita 1993). We note in passing that four of the eight objects in Table 2 that are from van Altena et al. (1995) have parallaxes that are either partially or completely based on the efforts of the Virginia program. CCD parallaxes will be available for several of these objects (as well as additional objects in Table 1) in the near future.

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