

## Nearby Star Positions

The following table may prove useful in calculating distances between stars and cross identifying stars with those in tables that give star distances in parallax or parsecs, or right ascension and declination in minutes and seconds as opposed to decimal.

### Nomenclature

n: Line number  
 Name: Proper name or distinctive catalog designation  
 RA: Right Ascension (Hrs min sec). Difference in time from when object is highest in the sky and when the first point of Ares is highest in the sky. Proxima is at 14 hrs 29 min 47.7  
 Dec: Declination (Deg min sec) Angular distance above or below the celestial equator.  
 $\pi$  Parallax: The angle subtended by the Earth's orbit at the star's distance.  
 D pc Distance to the star in parsecs ( $1/\pi$ ) 1 parsec = 3.26 light years  
 D ly Distance to the star in light years. 1 Light year  $9.46 \times 10^{15}$  meters.  
 x Component of distance in the Earth's equatorial plane towards the first point of Ares  
 y Component of distance in the Earth's equatorial plane 90 deg from the first point of Ares  
 z Distance above the Earth's equatorial plane. x, y and z are in light years.

Table 4. Nearby Star Positions

l lno.	Name	Right Asn. hhmmss.s	Declin. ddmmss.s	Distance pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)
1	Sun	0.0	0.0	0.00	206262.0	0.00	0.000	0.000	0.000
2	Proxima	142947.7	-624052.9	1.29	0.77233	4.22	-1.526	-1.194	-3.752
3	la Cen A	143940.9	-605006.5	1.35	0.74212	4.39	-1.628	-1.392	-3.838
4	la Cen B	143939.4	-605022.1	1.35	0.74212	4.39	-1.628	-1.391	-3.838
5	Barnard's	175749.0	44005.8	1.82	0.54901	5.94	0.020	-5.921	0.484
6	Wolf 359	105642.1	70311.0	2.39	0.41830	7.80	-7.461	2.052	0.957
7	LaI 21185	110320.6	355853.3	2.55	0.39240	8.31	-6.534	1.594	4.883
8	BL Cet	13849.7	-175727.2	2.63	0.38070	8.57	7.400	3.415	-2.641
9	UV Cet	13849.7	-175727.2	2.63	0.38070	8.57	7.400	3.415	-2.641
10	Sirius A	64509.2	-164247.3	2.64	0.37921	8.60	-1.652	8.070	-2.473
11	Sirius B	64511.0	-164154.7	2.64	0.37921	8.60	-1.653	8.071	-2.471
12	Ross 154	184949.0	-235008.8	2.97	0.33648	9.69	2.029	-8.631	-3.917
13	Ross 248	234153.9	441150.1	3.17	0.31560	10.33	7.395	-.459	7.205
14	eps Eri	33256.4	-92729.9	3.22	0.31075	10.50	6.176	8.310	-1.725
15	Lac 9352	230547.2	-355122.7	3.29	0.30390	10.73	8.489	-1.898	-6.287
16	Ross 128	114744.0	4827.1	3.34	0.29958	10.89	-10.875	0.490	0.153
17	L 789~6 A	223825.4	-152000.8	3.40	0.29430	11.08	10.077	-3.562	-2.931
18	L 789~6 C	223825.4	-152000.8	3.40	0.29430	11.08	10.077	-3.562	-2.931
19	L 789~6 B	223825.4	-152000.8	3.40	0.29430	11.08	10.077	-3.562	-2.931
20	Procyon A	73918.5	51339.0	3.50	0.28593	11.41	-4.826	10.283	1.039
21	Procyon B	73920.4	51427.7	3.50	0.28593	11.41	-4.827	10.282	1.042
22	61 Cyg A	210650.8	384429.4	3.48	0.28713	11.36	6.541	-5.977	7.109
23	61 Cyg B	210652.2	384403.9	3.50	0.28542	11.43	6.581	-6.012	7.150
24	Str 2398A	184248.5	593720.5	3.52	0.28448	11.47	1.153	-5.682	9.891
25	Str 2398B	184248.2	593733.7	3.52	0.28448	11.47	1.153	-5.681	9.891
26	Str 2398C	184257.5	593423.0	3.52	0.28448	11.47	1.158	-5.690	9.886

l line	Name	Right Asn.	Declin.	Distance						
l no.		h mm ss.s	d mm ss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l27	Grb 34 A	1820.5	440119.0	3.57	0.28027	11.64	8.341	0.671	8.087	
l28	Grb 34 B	1809.0	440103.9	3.57	0.28027	11.64	8.342	0.664	8.087	
l29	DX Can	82953.9	264712.8	3.63	0.27580	11.83	-6.474	8.339	5.330	
l30	eps Ind A	220317.4	-564647.3	3.63	0.27576	11.83	5.707	-3.069	-9.895	
l31	eps Ind B	220317.4	-564647.3	3.63	0.27576	11.83	5.707	-3.069	-9.895	
l32	eps Ind C	220317.4	-564647.3	3.63	0.27576	11.83	5.707	-3.069	-9.895	
l33	tau Cet	14405.1	-155622.4	3.65	0.27417	11.90	10.273	5.031	-3.267	
l34	YZ Cet	11229.9	-170001.9	3.72	0.26905	12.12	11.015	3.616	-3.544	
l35	Luyten`s	72724.2	51405.2	3.80	0.26326	12.39	-4.653	11.427	1.130	
l36	Kapteyn`s	51135.2	-450016.2	3.92	0.25526	12.78	1.861	8.841	-9.036	
l37	Lac 8760	211717.7	-385152.5	3.95	0.25337	12.87	7.700	-6.416	-8.077	
l38	Kr 60 A	222800.4	574149.3	4.01	0.24952	13.07	6.473	-2.625	11.048	
l39	Kr 60 B	222805.0	574207.4	4.01	0.24952	13.07	6.473	-2.623	11.049	
l40	D1048~395	104808.8	-395603.6	4.03	0.24790	13.16	-9.621	3.037	-8.446	
l41	Ross 614A	62923.0	-24844.9	4.12	0.24289	13.43	-1.777	13.294	-.659	
l42	Ross 614B	62921.4	-24809.1	4.12	0.24289	13.43	-1.775	13.294	-.657	
l43	Wolf 1061	163018.1	-123935.0	4.26	0.23451	13.91	-5.028	-12.604	-3.048	
l44	L 372~58	33556.5	-443022.8	4.29	0.23300	14.00	5.849	8.090	-9.813	
l45	Wolf 424A	123323.2	90102.9	4.31	0.23220	14.05	-13.707	-2.137	2.202	
l46	Wolf 424B	123323.2	90102.9	4.31	0.23220	14.05	-13.707	-2.137	2.202	
l47	GJ 1	520.3	-372106.1	4.36	0.22933	14.22	11.303	0.264	-8.629	
l48	vMA 2	4909.2	52342.7	4.41	0.22695	14.37	13.978	3.053	1.351	
l49	GJ 3522	85855.0	82847.1	4.46	0.22400	14.56	-10.201	10.166	2.147	
l50	TZ Ari	20009.1	130439.4	4.47	0.22380	14.57	12.279	7.124	3.298	
l line	Name	Right Asn.	Declin.	Distance						
l no.		h mm ss.s	d mm ss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l51	L 143~23	104433.8	-611257.6	4.49	0.22280	14.64	-6.688	2.227	-12.830	
l52	L 622~8	144932.7	-260640.2	4.51	0.22180	14.71	-9.658	-9.005	-6.472	
l53	L 622~7	144933.5	-260621.7	4.51	0.22180	14.71	-9.658	-9.005	-6.471	
l54	GJ 3622	104810.5	-111855.9	4.52	0.22100	14.76	-13.801	4.355	-2.896	
l55	GJ 687	173626.4	682032.0	4.53	0.22085	14.77	-.491	-5.428	13.726	
l56	GJ 674	172839.5	-465335.0	4.54	0.22043	14.80	-1.253	-10.033	-10.803	
l57	GJ 1245 A	195352.1	442521.5	4.55	0.22000	14.83	5.179	-9.235	10.377	
l58	GJ 1245 C	195352.1	442521.5	4.55	0.22000	14.83	5.179	-9.235	10.377	
l59	GJ 1245 B	195332.9	442432.4	4.54	0.22020	14.81	5.163	-9.236	10.365	
l60	GJ 440	114539.3	-645026.4	4.62	0.21640	15.07	-6.398	0.347	-13.642	
l61	GJ 1002	646.5	-73048.0	4.70	0.21280	15.33	15.189	0.450	-2.004	
l62	GJ 876	225316.2	-141543.4	4.70	0.21269	15.33	14.305	-4.032	-3.778	
l63	GJ 412 A	110532.1	433128.1	4.83	0.20694	15.76	-11.128	2.602	10.854	
l64	GJ 412 B	110551.4	433030.6	4.83	0.20694	15.76	-11.134	2.587	10.851	
l65	Grb 1618	101123.4	492719.7	4.87	0.20522	15.89	-9.227	4.648	12.077	
l66	AD Leo	101938.3	195215.6	4.90	0.20390	16.00	-13.671	6.278	5.437	
l67	GJ 832	213334.0	-490025.3	4.94	0.20253	16.10	8.576	-6.168	-12.155	
l68	GJ 682	173704.2	-441901.0	5.04	0.19832	16.45	-1.027	-11.722	-11.490	
l69	40Eri A	41517.6	-73840.4	5.04	0.19824	16.45	7.149	14.656	-2.189	
l70	40Eri B	41529.5	-73635.2	5.04	0.19824	16.45	7.137	14.663	-2.179	
l71	40Eri C	41529.5	-73635.2	5.04	0.19824	16.45	7.137	14.663	-2.179	
l72	GJ 873 A	224650.3	442006.4	5.05	0.19807	16.47	11.242	-3.513	11.508	
l73	GJ 873 B	224651.7	442022.4	5.05	0.19807	16.47	11.242	-3.512	11.509	
l74	GJ 873 C	224651.7	442022.4	5.05	0.19807	16.47	11.242	-3.512	11.509	
l75	70 Oph A	180527.2	23008.8	5.09	0.19662	16.59	0.609	-16.561	0.724	
l76	70 Oph B	180526.7	23048.8	5.09	0.19662	16.59	0.609	-16.561	0.727	

l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l77	Altair	195046.7	85202.6	5.14	0.19444	16.77	7.911	-14.564	2.586	
l78	lL 722~22A	1527.7	-160756.3	5.21	0.19186	17.00	16.293	1.104	-4.724	
l79	lL 722~22B	1527.7	-160756.3	5.21	0.19186	17.00	16.293	1.104	-4.724	
l80	lLP944~020	33921.1	-352524.6	4.97	0.20140	16.19	7.572	10.809	-9.387	
l81	lGJ 1116 A	85818.1	194549.6	5.23	0.19130	17.05	-11.335	11.357	5.765	
l82	lGJ 1116 B	85818.1	194555.6	5.23	0.19130	17.05	-11.335	11.357	5.766	
l83	lLTT 17897	60002.8	24229.2	5.37	0.18630	17.51	-.079	17.488	0.827	
l84	lGJ 445	114739.2	784124.0	5.39	0.18548	17.58	-3.445	0.157	17.243	
l85	lWolf 498	134542.7	145342.2	5.43	0.18413	17.71	-15.254	-7.770	4.553	
l86	lLP 816~06	205233.2	-165829.3	5.49	0.18215	17.91	11.896	-12.320	-5.228	
l87	lStn 2051A	43110.0	585855.4	5.51	0.18136	17.98	3.475	8.591	15.412	
l88	lStn 2051B	43102.4	590030.5	5.51	0.18136	17.98	3.477	8.583	15.417	
l89	lWolf 358	105052.5	64836.4	5.64	0.17746	18.38	-17.467	5.286	2.179	
l90	lWolf 1453	53127.0	-34019.7	5.69	0.17572	18.56	2.229	18.389	-1.189	
l91	lL 347~14	192045.1	-453111.1	5.69	0.17570	18.56	4.657	-12.144	-13.245	
l92	lWolf 294	65451.5	331634.3	5.76	0.17360	18.79	-3.800	15.241	10.309	
l93	lSig Dra	193220.6	693955.4	5.77	0.17341	18.81	2.647	-5.976	17.636	
l94	lGJ 229 A	61034.7	-215146.5	5.77	0.17319	18.83	-.884	17.456	-7.013	
l95	lGJ 229 B	61034.7	-215146.5	5.77	0.17319	18.83	-.884	17.456	-7.013	
l96	lRoss 47	54208.1	122935.4	5.79	0.17278	18.88	1.360	18.380	4.084	
l97	lGJ 693	174635.4	-571856.7	5.81	0.17208	18.95	-.468	-10.225	-15.953	
l98	lL 674~15	81240.6	-213230.2	5.88	0.17000	19.19	-9.851	14.880	-7.045	
l99	lRoss 652	191655.3	51008.1	5.87	0.17025	19.16	6.533	-17.927	1.726	
l100	lvB 10	191655.3	51008.1	5.87	0.17026	19.16	6.532	-17.926	1.726	
l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l101	lGJ 570 A	145727.4	-212440.6	5.91	0.16932	19.26	-12.686	-12.676	-7.032	
l102	lGJ 570 B	145715.9	-212424.6	5.89	0.16985	19.20	-12.657	-12.626	-7.009	
l103	lGJ 570 C	145715.9	-212424.6	5.89	0.16985	19.20	-12.657	-12.626	-7.009	
l104	lGJ 570 D	145709.0	-212130.0	5.89	0.16985	19.20	-12.668	-12.624	-6.994	
l105	lRoss 882	74440.4	33312.8	5.93	0.16859	19.35	-8.612	17.282	1.199	
l106	lGJ 588	153213.8	-411623.1	5.93	0.16852	19.35	-8.612	-11.723	-12.767	
l107	l eta Cas A	4905.1	574859.6	5.95	0.16799	19.42	10.104	2.204	16.432	
l108	l eta Cas B	4857.6	574928.0	5.95	0.16799	19.42	10.103	2.198	16.434	
l109	l 36 Oph A	171522.3	-263515.2	5.99	0.16708	19.52	-3.166	-17.167	-8.737	
l110	l 36 Oph B	171521.3	-263600.2	5.99	0.16708	19.52	-3.167	-17.165	-8.741	
l111	lV2215 Oph	171613.7	-263236.3	5.97	0.16756	19.47	-3.094	-17.137	-8.699	
l112	lLal 46650	234912.5	22404.4	5.97	0.16753	19.47	19.443	-.584	0.816	
l113	lGJ 783 A	201111.6	-360550.6	6.05	0.16524	19.74	8.832	-13.280	-11.629	
l114	lGJ 783 B	201110.2	-360451.3	6.05	0.16524	19.74	8.833	-13.284	-11.625	
l115	l 82 Eri	31953.2	-430417.6	6.06	0.16502	19.76	9.260	11.078	-13.498	
l116	l del Pav	200841.9	-661045.6	6.11	0.16373	19.92	4.382	-6.747	-18.224	
l117	lWolf 1481	143417.0	-123115.6	6.12	0.16351	19.95	-15.097	-12.299	-4.325	
l118	lGJ 3323	50158.7	-65614.7	6.13	0.16300	20.01	4.906	19.248	-2.417	
l119	lEGGR 372	174819.2	705135.8	6.14	0.16280	20.03	-.251	-6.564	18.927	
l120	lGJ 3454	73624.4	70503.5	6.17	0.16200	20.13	-8.258	18.193	2.483	
l121	lGJ 2130 A	174612.7	-320610.0	6.18	0.16177	20.16	-.810	-17.060	-10.715	
l122	lGJ 2130Ba	174614.5	-320606.0	6.18	0.16177	20.16	-.808	-17.060	-10.715	
l123	lGJ 2130Bb	174614.5	-320606.0	6.18	0.16177	20.16	-.808	-17.060	-10.715	
l124	lGJ 338 A	91424.3	524116.8	6.19	0.16159	20.18	-9.231	8.030	16.054	
l125	lGJ 338 B	91426.2	524116.7	6.27	0.15948	20.45	-9.354	8.135	16.266	

l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l 126	l GJ 784	201352.8	-450949.1	6.20	0.16117	20.24	8.041	-11.787	-14.351	
l 127	l L 100~115	94253.7	-685403.8	6.21	0.16100	20.26	-6.055	4.065	-18.900	
l 128	l GJ 3877	145640.0	-280913.8	6.21	0.16100	20.26	-12.678	-12.581	-9.559	
l 129	l GJ 896 A	233151.8	195614.7	6.25	0.16006	20.38	19.049	-2.025	6.949	
l 130	l GJ 896 B	233150.5	195615.2	6.25	0.16006	20.38	19.049	-2.027	6.949	
l 131	l GJ 896 C	233150.5	195615.2	6.25	0.16006	20.38	19.049	-2.027	6.949	
l 132	l GJ 896 D	233150.5	195615.2	6.25	0.16006	20.38	19.049	-2.027	6.949	
l 133	l Wolf 562	151927.5	-74319.3	6.27	0.15952	20.45	-12.889	-15.632	-2.747	
l 134	l D0255~470	25503.3	-470049.0	6.28	0.15920	20.49	10.068	9.683	-14.987	
l 135	l GJ 661 A	171207.6	454011.4	6.32	0.15817	20.62	-2.814	-14.132	14.751	
l 136	l GJ 661 B	171206.7	454113.9	6.32	0.15817	20.62	-2.814	-14.128	14.755	
l 137	l Ross 986A	71002.2	383154.4	6.36	0.15724	20.74	-4.961	15.449	12.922	
l 138	l Ross 986B	71002.2	383154.4	6.36	0.15724	20.74	-4.961	15.449	12.922	
l 139	l Sand 215	130702.5	204857.4	6.41	0.15600	20.91	-18.659	-5.811	7.430	
l 140	l GJ 3959	163110.8	405132.4	6.41	0.15600	20.91	-5.802	-14.710	13.678	
l 141	l EGGR 45	55507.8	-40815.9	6.46	0.15480	21.07	0.357	21.012	-1.520	
l 142	l GJ 644 A	165529.2	-82003.1	6.45	0.15497	21.05	-5.542	-20.074	-3.051	
l 143	l GJ 644 Ba	165530.9	-81931.7	6.45	0.15497	21.05	-5.539	-20.075	-3.047	
l 144	l GJ 644 Bb	165530.9	-81931.7	6.45	0.15497	21.05	-5.539	-20.075	-3.047	
l 145	l vB 8	165538.0	-82301.2	6.45	0.15497	21.05	-5.528	-20.074	-3.069	
l 146	l GJ 643	165525.7	-81913.4	6.50	0.15396	21.18	-5.583	-20.204	-3.066	
l 147	l GJ 892	231314.7	571003.5	6.53	0.15324	21.28	11.338	-2.150	17.884	
l 148	l L 1190~34	121904.7	110720.5	6.54	0.15290	21.33	-20.842	-1.924	4.115	
l 149	l GJ 625	162524.2	541816.3	6.58	0.15193	21.47	-4.889	-11.532	17.435	
l 150	l Ross 104	110004.5	225001.1	6.62	0.15096	21.61	-19.276	4.996	8.384	

l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l 151	l xi Boo A	145123.3	190602.3	6.70	0.14926	21.85	-14.989	-14.202	7.151	
l 152	l xi Boo B	145122.9	190602.4	6.70	0.14926	21.85	-14.989	-14.202	7.151	
l 153	l Ross 775A	212936.2	173832.6	6.74	0.14829	21.99	16.802	-12.531	6.666	
l 154	l Ross 775A	212936.2	173832.6	6.74	0.14829	21.99	16.802	-12.531	6.666	
l 155	l L 119~44	223755.6	-654902.9	6.80	0.14700	22.19	8.563	-3.047	-20.241	
l 156	l Ross 619	81153.6	84622.2	6.99	0.14300	22.81	-12.379	18.838	3.479	
l 157	l GJ 3192 A	30151.1	-163531.0	6.86	0.14580	22.37	15.003	15.314	-6.388	
l 158	l GJ 3193 B	30151.1	-163531.0	6.86	0.14580	22.37	15.003	15.314	-6.388	
l 159	l GJ 3192 C	30151.1	-163531.0	6.86	0.14580	22.37	15.003	15.314	-6.388	
l 160	l Ross 671	225635.4	163314.8	6.88	0.14527	22.45	20.797	-5.538	6.397	
l 161	l L 97~12	75302.5	-674617.8	6.91	0.14470	22.54	-4.080	7.488	-20.865	
l 162	l GJ 667 A	171856.4	-345922.5	6.97	0.14345	22.74	-3.092	-18.369	-13.038	
l 163	l GJ 667 B	171852.4	-345925.2	6.97	0.14345	22.74	-3.097	-18.368	-13.038	
l 164	l GJ 667 C	171853.5	-345943.1	6.97	0.14345	22.74	-3.095	-18.367	-13.040	
l 165	l GJ 667 D	171856.4	-345912.7	6.97	0.14345	22.74	-3.092	-18.370	-13.037	
l 166	l GJ 809	205319.8	620922.6	7.04	0.14195	22.98	7.480	-7.695	20.317	
l 167	l L 471~42	123851.9	-382123.7	7.19	0.13900	23.46	-18.107	-3.270	-14.561	
l 168	l HR 753 A	23603.8	65300.1	7.21	0.13872	23.51	18.109	14.729	2.818	
l 169	l HR 753 B	23609.5	65105.6	7.21	0.13872	23.51	18.104	14.737	2.805	
l 170	l GJ 1286	233508.0	-22243.0	7.22	0.13860	23.53	23.414	-2.151	-.977	
l 171	l Ross 446	102855.9	5034.0	7.23	0.13829	23.59	-21.813	8.963	0.347	
l 172	l GJ 3991 A	170931.3	434055.3	7.25	0.13784	23.66	-3.533	-16.743	16.342	
l 173	l GJ 3391 B	170931.3	434055.3	7.25	0.13784	23.66	-3.533	-16.743	16.342	
l 174	l GJ 4053	181853.9	661152.3	7.28	0.13730	23.76	0.915	-9.543	21.735	

l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l175	GJ 1230 A	184107.3	244702.0	7.35	0.13600	23.98	4.172	-21.370	10.053	
l176	GJ 1230 C	184107.3	244702.0	7.35	0.13600	23.98	4.172	-21.370	10.053	
l177	GJ 1230 B	184107.3	244708.0	7.35	0.13600	23.98	4.172	-21.370	10.054	
l178	L 788~34	222305.7	-173551.0	7.46	0.13410	24.32	21.292	-9.173	-7.353	
l179	Wolf 25	4822.5	51700.2	7.46	0.13404	24.33	23.689	5.090	2.241	
l180	HR 493	14229.9	201612.5	7.47	0.13391	24.36	20.589	9.907	8.438	
l181	bet Hyd	2539.2	-771518.1	7.47	0.13378	24.38	5.345	0.602	-23.780	
l182	LHS 1070A	2442.3	-270922.5	7.87	0.12700	25.68	22.717	2.465	-11.722	
l183	LHS 1070B	2442.3	-270922.5	7.87	0.12700	25.68	22.717	2.465	-11.722	
l184	LHS 1070C	2442.3	-270922.5	7.87	0.12700	25.68	22.717	2.465	-11.722	
l185	LHS 1070D	2442.3	-270922.5	7.87	0.12700	25.68	22.717	2.465	-11.722	
l186	GJ1224	180734.8	-155739.4	7.54	0.13270	24.58	1.088	-23.606	-6.759	
l187	Ross 556	24415.0	253127.3	7.55	0.13242	24.63	16.730	14.633	10.613	
l188	$\mu$ Cas A	10812.9	545527.2	7.55	0.13240	24.63	13.531	4.163	20.161	
l189	$\mu$ Cas B	10756.0	545632.2	7.55	0.13240	24.63	13.530	4.144	20.165	
l190	L 1813~21	60110.6	593644.4	7.56	0.13220	24.67	-.118	12.480	21.282	
l191	Ross 490	132959.1	102247.2	7.63	0.13112	24.87	-22.514	-9.580	4.482	
l192	GJ 879	225623.8	-313354.6	7.64	0.13094	24.91	20.504	-5.478	-13.039	
l193	L 399~68	124046.9	-433405.0	7.66	0.13052	24.99	-17.790	-3.367	-17.223	
l194	Fomalhaut	225738.8	-293718.6	7.69	0.13008	25.07	21.089	-5.511	-12.393	
l195	Wolf 718	172545.6	20651.5	7.72	0.12954	25.18	-3.434	-24.926	0.929	
l196	GJ 3417	65755.0	621951.1	7.75	0.12900	25.28	-2.992	11.353	22.392	
l197	Vega	183656.2	384658.8	7.76	0.12893	25.30	3.424	-19.420	15.846	
l198	GJ 1093	65925.5	192143.5	7.76	0.12890	25.30	-6.236	23.043	8.389	
l199	L 991~14	180507.2	-30149.8	7.80	0.12828	25.43	0.896	-25.374	-1.344	
l200	L 362~81	207.8	-430923.9	7.80	0.12820	25.44	18.558	0.173	-17.402	
l line	Name	Right Asn.	Declin.	Distance						
l no.		hhmmss.s	ddmmss.s	pc	$\pi$ (as)	LY	x(LY)	y(LY)	z(LY)	
l201	GJ 382	101217.8	-34442.3	7.81	0.12799	25.48	-22.756	11.349	-1.664	
l202	DG CVn	133147.2	291633.2	7.94	0.12600	25.89	-20.706	-9.004	12.659	
l203	GJ 793	203031.4	652655.9	7.96	0.12562	25.96	6.712	-8.446	23.617	
l204	GJ 1087	55626.9	52239.2	7.99	0.12510	26.07	0.292	25.956	2.443	
l205	Wolf 922A	213117.9	-94725.9	8.01	0.12482	26.13	20.755	-15.241	-4.443	
l206	Wolf 922B	213114.9	-94724.8	8.01	0.12482	26.13	20.751	-15.246	-4.443	
l207	GJ 257 A	65747.5	-441727.9	8.02	0.12462	26.17	-4.765	18.118	-18.276	
l208	GJ 257 B	65751.6	-441721.9	8.02	0.12462	26.17	-4.770	18.117	-18.276	
l209	1 Ori	44950.1	65740.5	8.03	0.12460	26.18	7.745	24.802	3.173	
l210	GJ 623 A	162408.3	482114.4	8.04	0.12434	26.23	-6.893	-16.011	19.602	
l211	GJ 623 B	162408.3	482114.4	8.04	0.12434	26.23	-6.893	-16.011	19.602	
l212	LP 701~29	225345.1	-64620.7	8.05	0.12420	26.26	25.114	-7.022	-3.097	
l213	chi Dra A	182102.3	724401.3	8.06	0.12411	26.28	0.817	-7.757	25.096	
l214	chi Dra B	182102.3	724401.3	8.06	0.12411	26.28	0.817	-7.757	25.096	

Note:

To get distance between stars, we use the pythagorean theorm in three dimensions: First subtract the x,y, and z values of one star from another and square each answer. Then take the square root of the sum of those squares. In equation form:

$$\text{Distance} = \sqrt{(x_2-x_1)^2 + (y_2-y_1)^2 + (z_2-z_1)^2}$$

For example, we can calculate the distance between Wolf 359 and Barnard's Star.

Wolf 359's Cartesian coordinates are  $x=-7.445$ ,  $y=2.110$ , and  $z=0.957$ ;

Barnard's Cartesian coordinates are  $x=-.056$ ,  $y=-5.921$ , and  $z=0.484$

The differences between coordinates are:  $\Delta x=7.389$ ,  $\Delta y= 8.031$ , and  $\Delta z=0.473$

The squares of the differences are:  $\Delta x^2=54.6$ ,  $\Delta y^2=64.5$ , and  $\Delta z^2=0.224$

The sum of the squares of the differences is: 119.32

The square root is: 10.92. So Wolf 359 and Barnard's star are 10.92 light years apart.