

Table 2: Proper Motions

Table of Hipparcos and Tycho Catalogue sources in the central region of NGC1788 (such data as distance and proper motion vectors). The objects are also cross-listed with the X-Ray sources

D	Right Ascension (ICRS)	Declination (ICRS)	Proper Motion (mas/yr)	Angle ^a (degrees)	Distance ^b (pc)
Proper Motion Data (X-Ray Source)					
23837	76.872459	-3.311362	3.62	-17.68	657.89
23819	76.799461	-3.496334	21.17	-52.99	269.54
23745	76.554520	-3.484916	5.30	-45.00	247.52
T1 (11a,b)	76.712723	-3.333320	24.09	172.67	-158.73
T2 (5)	76.687889	-3.255947	18.37	135.76	33.56
T4 (19)	76.614967	-3.383993	55.30	-82.85	-1000.00
T6	76.882889	-3.240739	78.64	-12.43	27.40
T7 (16)	76.513641	-3.352346	36.46	-152.03	51.28
T10	76.511063	-3.275390	15.03	-37.25	-13.89
T14	76.541435	-3.625343	18.48	34.43	85.47

^a rotated counterclockwise from due east
^b negative values indicate large uncertainties in Tycho Catalogue

Table 1: Multi-Wavelength Matches

Table of correlated x-ray, near-infrared and optical object

ID	H α EW (\AA) ^a	Li 6708 EW (\AA)	Spectral Type
X-Ray Sources Optical Spectra			
5	5.51 ± 0.20	...	F5-7
7	-1.30 ± 0.10	0.39 ± 0.05	K6-8
9	-1.60 ± 0.11	0.23 ± 0.03	K6-8
10	8.71 ± 0.39	...	A2
11a ^b	-2.58 ± 0.03	0.38 ± 0.02	K5 double?
11b ^b	-4.52 ± 0.35	...	M1/M2
12a	-1.47 ± 0.14	0.10 ± 0.21	K1-3 double lined?
12b	-1.66 ± 0.09	0.47 ± 0.03	K5
15	-50.79 ± 3.03	0.35 ± 0.03	K3-5 CTTS?
16	4.63 ± 0.24	...	F5-7
17	-72.85 ± 1.96	0.18 ± 0.02	K6-8 CTTS?
19	5.85 ± 0.38	...	F3-5
21	-1.22 ± 0.11	0.44 ± 0.05	K3-5
Blob	-62.01 ± 1.72	...	HII region?

^a – denotes emission
^b questionable ID with respect to 2MASS and Optical matches

ID	Right Ascension	DEC	K-Magnitude	J-H	H-K
X-Ray Sources with 2-micron All-Sky Survey data					
18	76.408195	-3.379974	7.112 ± 0.014	0.408 ± 0.023	0.059 ± 0.021 ^b
16	76.513603	-3.352353	9.095 ± 0.030	0.180 ± 0.042	0.092 ± 0.042
24	76.599052	-3.479960	12.549 ± 0.044	0.424 ± 0.050	0.094 ± 0.053
20	76.608299	-3.390816	12.337 ± 0.032	0.646 ± 0.035	0.192 ± 0.039
19	76.614990	-3.384055	7.397 ± 0.013	0.157 ± 0.044	0.052 ± 0.044
14	76.615944	-3.340813	12.299 ± 0.031	0.581 ± 0.033	0.303 ± 0.038
5	76.687927	-3.255841	8.722 ± 0.030	0.147 ± 0.041	0.103 ± 0.047
7&	76.694374	-3.301538	10.933 ± 0.031	0.754 ± 0.040	0.165 ± 0.040
23	76.701363	-3.460579	10.574 ± 0.028	0.730 ± 0.033	0.275 ± 0.036
3	76.704140	-3.095234	12.073 ± 0.034	0.662 ± 0.038	0.188 ± 0.042
11a ^a	76.711807	-3.326302	9.881 ± null	2.256 ± 0.057	0.484 ± null ^{c,d}
11b ^a	76.710670	-3.326560	13.329 ± 0.160	0.652 ± 0.148	0.354 ± 0.211 ^c
15 ^a	76.720261	-3.348090	8.381 ± 0.042	1.219 ± 0.045	0.419 ± 0.053 ^b
12 ^a	76.727699	-3.334616	8.433 ± 0.032	1.141 ± 0.035	0.757 ± 0.041 ^b
9 ^a	76.737282	-3.309829	10.034 ± 0.031	0.864 ± 0.035	0.284 ± 0.040
17 ^a	76.775436	-3.357789	10.927 ± 0.030	0.805 ± 0.036	0.401 ± 0.040
21	76.795624	-3.398112	10.891 ± 0.031	0.615 ± 0.036	0.157 ± 0.038
22	76.812500	-3.446426	10.609 ± 0.030	0.689 ± 0.036	0.163 ± 0.037
13	76.842918	-3.338450	11.444 ± 0.028	0.596 ± 0.034	0.260 ± 0.036
6	76.858124	-3.286715	12.246 ± 0.034	0.739 ± 0.037	0.183 ± 0.043
10	76.872589	-3.311286	8.804 ± 0.028-	0.041 ± 0.026	0.078 ± 0.036
8	76.907051	-3.304309	11.464 ± 0.029	0.701 ± 0.032	0.128 ± 0.036
2-micron All-Sky Survey Objects within image 'ir.fits' (X-Ray Source Match)					
6	76.689453	-	14.738 ±	0.464 ±	0.241 ± 0.140

		3.300589	0.113	0.099	
18	76.691917	-	10.307 ±	1.700 ± 0.033	1.180 ± 0.035
		3.322858	0.028		
5 (7)	76.694374	-	10.933 ±	0.754 ± 0.040	0.165 ± 0.040
		3.301538	0.031		
36	76.696091	-	11.865 ±	0.487 ± 0.035	0.127 ± 0.039
		3.353599	0.031		
13	76.697754	-	12.931 ±	0.902 ± 0.041	0.431 ± 0.042
		3.319332	0.032		
46	76.703293	-	14.025 ±	1.220 ± 0.081	0.406 ± 0.081
		3.376712	0.063		
45	76.706245	-	14.478 ±	1.661 ± 0.240	0.937 ± 0.108
		3.372756	0.108		
17	76.707390	-	11.142 ±	0.852 ± 0.032	0.349 ± 0.036
		3.325831	0.029		
33	76.707443	-	10.447 ±	1.348 ± 0.033	0.874 ± 0.036
		3.350989	0.029		
26	76.710426	-	12.517 ±	0.715 ± 0.040	0.383 ± 0.045
		3.337263	0.035		
16 (11b)	76.710670	-	13.329 ±	0.652 ± 0.148	0.354 ± 0.211
		3.326560	0.160		
25	76.711418	-	12.509 ±	0.680 ± 0.050	0.420 ± 0.052
		3.335513	0.043		
15 (11a)	76.711807	-	9.881 ± null	2.256 ± 0.057	0.484 ± null ^d
		3.326302			
14	76.712425	-	9.569 ±	0.796 ± 0.044	0.453 ± 0.049
		3.327160	0.036		
23	76.712715	-	9.361 ±	0.011 ± 0.036	0.089 ± 0.041
		3.333277	0.031		
24	76.715187	-	15.138 ±	0.594 ± null	1.221 ± 0.139 ^d
		3.335542	0.139		
32 (15)	76.720261	-	8.381 ±	1.219 ± 0.045	0.419 ± 0.053
		3.348090	0.042		
31	76.722191	-	8.083 ±	1.440 ± 0.035	0.834 ± 0.041
		3.347918	0.032		
30	76.723907	-	13.081 ±	-0.628 ±	1.409 ± 0.141
		3.348176	0.070	0.122	
38	76.724434	-	14.147 ±	1.085 ± 0.210	1.005 ± 0.176
		3.354185	0.113		
29	76.727203	-	14.303 ±	1.140 ± 0.126	0.489 ± 0.118
		3.346077	0.092		
22 (12)	76.727699	-	8.433 ±	1.141 ± 0.035	0.757 ± 0.041
		3.334616	0.032		
27	76.728310	-	12.056 ±	2.315 ± 0.084	1.249 ± 0.052
		3.342799	0.038		
28	76.728783	-	12.799 ±	2.120 ± 0.064	1.888 ± 0.074
		3.346702	0.038		
35	76.728889	-	9.519 ±	2.051 ± 0.040	1.436 ± 0.040
		3.353489	0.029		
37	76.730873	-	11.491 ±	1.224 ± 0.064	0.752 ± 0.061
		3.355497	0.052		

34	76.731339	- 3.353633	8.489 ± 0.033	0.806 ± 0.037	0.598 ± 0.042
9 (9)	76.737282	- 3.309829	10.034 ± 0.031	0.864 ± 0.035	0.284 ± 0.040
44	76.738235	- 3.376143	15.097 ± 0.150	0.688 ± 0.131	0.216 ± 0.183
21	76.740608	- 3.330404	14.287 ± 0.068	0.550 ± 0.071	0.212 ± 0.089
11	76.741699	- 3.317119	11.320 ± 0.031	0.476 ± 0.036	0.209 ± 0.041
49	76.742622	- 3.396161	14.531 ± 0.090	0.865 ± 0.091	0.234 ± 0.112
41	76.743202	- 3.359722	11.122 ± 0.033	2.109 ± 0.045	1.058 ± 0.041 ^e
8	76.743828	- 3.309914	14.637 ± 0.092	0.998 ± 0.115	0.377 ± 0.119
3	76.744911	- 3.298639	15.749 ± 0.349	0.917 ± 0.273	-0.082 ± 0.419
12	76.748741	- 3.324462	13.907 ± 0.056	0.677 ± 0.057	0.210 ± 0.071
20	76.752869	- 3.332685	12.726 ± 0.034	1.083 ± 0.043	0.384 ± 0.046
48	76.754959	- 3.396132	13.751 ± 0.051	1.221 ± 0.064	0.364 ± 0.065
40	76.758804	- 3.362394	14.656 ± 0.096	1.235 ± 0.136	0.447 ± 0.126
2	76.769188	- 3.298904	10.081 ± 0.030	0.584 ± 0.038	0.178 ± 0.041
10	76.769455	- 3.313268	14.841 ± 0.109	0.532 ± 0.111	0.255 ± 0.142
1	76.770653	- 3.292746	13.927 ± 0.055	0.370 ± 0.052	0.088 ± 0.069
19	76.773849	- 3.331822	14.118 ± 0.063	1.196 ± 0.085	0.343 ± 0.080
43	76.774818	- 3.377525	11.822 ± 0.032	0.391 ± 0.036	0.180 ± 0.039
7	76.775414	- 3.310128	12.958 ± 0.037	0.740 ± 0.042	0.226 ± 0.048
39 (17)	76.775436	- 3.357789	10.927 ± 0.030	0.805 ± 0.036	0.401 ± 0.040
4	76.776024	- 3.304681	13.875 ± 0.054	0.753 ± 0.051	0.135 ± 0.066
42	76.777748	- 3.371489	12.800 ± 0.036	0.635 ± 0.039	0.169 ± 0.043
47	76.781693	- 3.397004	11.643 ± 0.031	0.400 ± 0.035	0.096 ± 0.037

^a X-Ray source with 2MASS match in table

^b Only one reasonable result though appears double

^c Two reasonable matches, closest one listed first

^d null error as listed by 2MASS

^e Visual double, too bright to resolve

ID	Right Ascension	Declination	V- Magnitud e	B-V	V-R	R-I
X-Ray Sources with ESO BVRI Optical data						
6	76.857956	-3.286722	17.457	1.696	1.014	1.535
8	76.906883	-3.304333	15.423	1.492	0.869	0.860
11a ^a	76.711761	-3.326305	16.930	1.602	1.010	1.429
11b ^a	76.712479	-3.326722	16.244	1.215	1.074	1.072
13	76.842834	-3.338417	16.969	1.904	1.064	1.760
14	76.615898	-3.340667	18.429	1.848	1.141	2.090
17 ^a	76.775368	-3.357805	16.398	1.590	1.045	1.247
20	76.608253	-3.390639	18.202	1.412	1.070	2.048
23	76.701332	-3.460528	16.233	1.892	1.053	1.694
3	76.704033	-3.095250	17.586	1.906	1.081	1.732
Optical Objects in image 'ir.fits' (numbers correspond to 2MASS IDs and letters to only visual objects)						
(X-ray Source Match)						
18	76.691887	-3.322750	17.593	1.826	1.196	1.338
13	76.697723	-3.319222	20.556	1.643	0.924	0.868
46	76.703239	-3.376611	20.622	null ^d	1.433	1.361
P ^b	76.706474	-3.393861	21.286	2.041	1.184	1.310
17	76.707352	-3.325750	17.904	1.883	1.305	1.930
33	76.707375	-3.350889	18.836	1.514	1.273	1.817
N	76.708824	-3.379278	21.045	1.596	0.952	0.945
26	76.710419	-3.337250	21.366	null ^d	1.811	2.929
16 (11b) ^c	76.710617	-3.326528	20.031	null ^d	1.050	2.310
25	76.711403	-3.335472	19.596	1.090	1.144	2.321
15 (11a)	76.711761	-3.326305	16.930	1.602	1.010	1.429
14 (11b) ^c	76.712479	-3.326722	16.244	1.215	1.074	1.072
M ^b	76.718056	-3.394695	21.091	1.525	0.869	0.879
35	76.728851	-3.353472	18.717	0.868	1.045	1.626
L	76.729622	-3.387583	19.804	1.338	0.789	0.857
44	76.738159	-3.376139	21.142	null ^d	1.146	1.981
21	76.740555	-3.330417	20.228	2.284	1.179	1.957
49	76.742531	-3.396167	19.181	1.439	0.859	0.987
8	76.743797	-3.309861	19.975	1.497	1.012	1.022
K	76.744759	-3.383139	22.134	null ^d	1.184	1.241
3	76.744804	-3.298528	19.822	1.457	0.900	0.839
J	76.745857	-3.297722	22.344	null ^d	1.415	1.977
12	76.748672	-3.324444	18.097	1.264	0.755	0.879
20	76.752800	-3.332694	18.904	1.976	1.281	1.291
48	76.754868	-3.396167	20.222	2.180	1.317	1.295
H	76.755333	-3.313000	21.519	null ^d	0.615	0.693
I	76.758751	-3.362361	21.220	null ^d	1.236	1.356
G ^b	76.763962	-3.310639	22.512	null ^d	1.252	1.252
D	76.768608	-3.377778	21.656	null ^d	0.753	0.860
F	76.768860	-3.390361	21.994	null ^d	1.318	1.401
10	76.769432	-3.313278	17.937	1.085	0.571	0.565
1	76.770607	-3.292778	16.105	0.771	0.385	0.436
C	76.770844	-3.351055	22.178	null ^d	1.090	1.317
19	76.773804	-3.331833	20.909	null ^d	1.376	1.616
B	76.775314	-3.325861	22.039	null ^d	1.117	0.971

39 (17)	76.775368	-3.357805	16.398	1.590	1.045	1.247
7	76.775368	-3.310139	17.180	1.458	0.899	0.854
4	76.775970	-3.304667	17.806	1.338	0.759	0.774
42	76.777718	-3.371500	16.356	1.288	0.717	0.709
A	76.782356	-3.295389	21.303	null ^d	0.864	0.851

^a X-Ray source with optical match in table

^b Faint stars

^c questionable matches; crowded region

^d no match in B-magnitudes