Table 1. X-ray sources detected in PSPC pointing A. The first column lists a unique source number that is also used in the following Tables 2–4 and 5–8. CR is the count rate (in s^{-1}), ECR the corresponding error, *hr* is the hardness ratio (see text), f_x is the X-ray flux in 10^{-13} erg cm^{-2} s^{-1}, and L_x is the X-ray luminosity in 10^{30} erg s^{-1}, given only if the distance (i.e., probable cluster membership, see Sect. 5) is known. The last column indicates whether a source is detected in the soft (s) or hard (h) passband only.

X#	CR	ECR	*hr*	f_x	L_x	Notes
1	0.00654	0.00201		0.39		h
2	0.10473	0.00474	0.173	8.27		
6	0.00235	0.00074		0.14		h
7	0.01552	0.00187		1.24	1.93	
8	0.03315	0.00245	0.206	3.12		
11	0.00590	0.00120		0.47	0.20	
12	0.00813	0.00136		0.65	1.01	
13	0.00936	0.00164	0.271	0.91		
14	0.00216	0.00064		0.13		h
15	0.00679	0.00105		0.54	0.84	
17	0.00386	0.00084		0.31	0.48	
22	0.00505	0.00117	−0.065	0.40	0.17	
24	0.00294	0.00076		0.18		
26	0.00349	0.00084		0.28	0.43	
27	0.01539	0.00146	0.719	1.87	2.89	
29	0.00403	0.00078		0.32	0.50	
30	0.00277	0.00072		0.22	0.10	
31	0.01618	0.00147	0.276	1.58	0.68	
32	0.00387	0.00090	0.031	0.33	0.14	
33	0.00263	0.00067		0.21	0.33	
35	0.00611	0.00134		0.49		
37	0.00285	0.00069		0.23		
38	0.00139	0.00052		0.11		
39	0.00216	0.00060		0.17	0.27	
40	0.00309	0.00070		0.25	0.11	
42	0.01820	0.00192		1.46	2.26	
44	0.00228	0.00061		0.18		
45	0.00277	0.00066		0.22	0.34	
50	0.00395	0.00073		0.32	0.49	
51	0.00123	0.00050		0.07		
53	0.00285	0.00088		0.17		
56	0.00191	0.00061		0.15	0.24	
57	0.00255	0.00060		0.20	0.32	
59	0.00300	0.00076		0.24	0.10	
60	0.01201	0.00127	0.705	1.45	2.24	
63	0.00275	0.00075		0.22	0.10	
64	0.00503	0.00088		0.40	0.62	
65	0.00476	0.00082		0.38	0.59	
66	0.00555	0.00086		0.44	0.69	
67	0.00070	0.00031		0.04		
68	0.01052	0.00115	0.723	1.28	1.98	
72	0.01532	0.00135		1.23	0.53	
74	0.00970	0.00116		0.78	1.20	
80	0.00638	0.00099	−0.376	0.40	0.17	
81	0.00197	0.00072		0.16	0.24	
83	0.00129	0.00048		0.10	0.04	
87	0.00070	0.00030		0.06		h
88	0.00464	0.00140		0.37	0.58	
90	0.00293	0.00091		0.18		
92	0.00265	0.00083		0.16		h
94	0.00844	0.00102		0.68	1.05	
96	0.00553	0.00088		0.44	0.69	
97	0.00518	0.00127		0.31	0.14	
98	0.00075	0.00035		0.05		
101	0.00968	0.00118	0.288	0.95	1.48	
103	0.00879	0.00107	0.234	0.84	0.36	
104	0.00119	0.00048		0.07		
105	0.00640	0.00092		0.51	0.79	
106	0.00647	0.00103	−0.018	0.53	0.23	
107	0.00458	0.00078		0.37	0.57	
108	0.00167	0.00060		0.13	0.06	
109	0.00188	0.00062		0.15	0.06	s
110	0.01679	0.00143	0.801	2.11	3.27	
111	0.00247	0.00063		0.20	0.31	
112	0.00168	0.00055		0.13	0.21	
115	0.01151	0.00120	0.777	1.43	2.22	
117	0.02751	0.00252	0.132	2.48	1.07	
118	0.00277	0.00088		0.17		
119	0.00447	0.00110		0.36	0.55	h
120	0.00344	0.00106		0.28	0.43	h
123	0.00208	0.00072		0.12		
124	0.00268	0.00078		0.21		
128	0.06217	0.00270	0.241	6.38	2.76	
130	0.00394	0.00078		0.32		
131	0.00400	0.00106		0.32	0.50	
132	0.01512	0.00138	0.161	1.39	0.60	
133	0.00150	0.00053		0.12	0.19	
134	0.01111	0.00172		0.89	0.38	
137	0.00589	0.00079		0.47	0.73	h
139	0.00271	0.00072		0.22	0.34	
141	0.00222	0.00068		0.13		
142	0.01133	0.00137	0.150	1.03	0.44	
143	0.00409	0.00086		0.25		
144	0.00519	0.00102	0.344	0.53	0.23	
145	0.00205	0.00059		0.16	0.25	
146	0.00153	0.00060		0.09		
147	0.00283	0.00090		0.17		
148	0.00236	0.00068		0.19	0.29	
149	0.00380	0.00096	0.163	0.35	0.15	
150	0.00822	0.00108		0.66	1.02	
151	0.06465	0.00331	0.222	5.08	2.20	
152	0.00089	0.00037		0.07	0.03	h
154	0.00429	0.00083		0.34	0.53	
155	0.00155	0.00063		0.12	0.19	
156	0.05931	0.00276	0.287	5.14	2.22	
157	0.00418	0.00112		0.33	0.14	
158	0.00502	0.00086		0.40	0.62	h
159	0.00228	0.00066		0.14		
160	0.00807	0.00137	−0.110	0.62	0.27	
161	0.00655	0.00121		0.52	0.81	
162	0.00305	0.00083		0.18		
163	0.00320	0.00086		0.19		
167	0.00166	0.00058		0.13	0.21	h
172	0.00750	0.00113		0.60	0.93	
173	0.00924	0.00146	0.357	0.94	0.41	
174	0.00119	0.00048		0.07		h
176	0.00709	0.00147		0.43		
177	0.04377	0.00383	0.271	4.27	1.84	
178	0.01156	0.00195		0.69		
180	0.00200	0.00074		0.16	0.25	h
181	0.01590	0.00217	0.161	1.46	0.63	
182	0.00408	0.00110		0.24		h
185	0.00695	0.00167		0.42		
186	0.00532	0.00165		0.43	0.66	h
187	0.01710	0.00238	0.127	1.54	0.66	
188	0.02103	0.00277	0.533	2.34	1.01	

Table 2. Same as Table 1, but for PSPC pointing B.

X#	CR	ECR	*hr*	f_x	L_x	Notes
2	0.14174	0.00523	0.253	9.99		
4	0.02022	0.00328		1.62		
5	0.00421	0.00098		0.25		h
7	0.01840	0.00203		1.47	2.28	
8	0.03597	0.00251	0.323	3.60		
10	0.00195	0.00073		0.12		h
11	0.00708	0.00121		0.57	0.24	
12	0.00825	0.00145		0.66	1.02	
15	0.01057	0.00131		0.85	1.31	
17	0.00466	0.00085		0.37	0.58	
22	0.00465	0.00114		0.37	0.16	
24	0.00248	0.00060		0.15		h
26	0.00335	0.00077		0.27	0.42	
27	0.00863	0.00109		0.69	1.07	
29	0.00338	0.00072		0.27	0.42	
30	0.00272	0.00071		0.22	0.09	
31	0.02059	0.00157	0.348	2.09	0.90	
32	0.00277	0.00078		0.22	0.10	
33	0.00403	0.00078		0.32	0.50	
34	0.00186	0.00063		0.15		
36	0.00201	0.00060		0.16		
40	0.00255	0.00062		0.20	0.09	
41	0.00277	0.00066		0.22		
42	0.01808	0.00186		1.45	2.24	
43	0.00059	0.00028		0.05	0.07	h
44	0.00298	0.00067		0.24		
45	0.00464	0.00078		0.37	0.58	
50	0.00569	0.00083		0.46	0.71	
57	0.00310	0.00067		0.25	0.38	
58	0.00124	0.00047		0.07		
59	0.00233	0.00070		0.19	0.08	
60	0.01121	0.00116	0.742	1.37	2.13	
63	0.00435	0.00086		0.35	0.15	
64	0.00272	0.00069		0.22	0.34	
65	0.00431	0.00075		0.35	0.53	
66	0.00194	0.00053		0.16	0.24	
67	0.00065	0.00030		0.04		h
68	0.00733	0.00092		0.59	0.91	
72	0.01116	0.00112		0.89	0.39	
73	0.00057	0.00027		0.05		h
74	0.00738	0.00096		0.59	0.92	
80	0.00677	0.00099	0.079	0.59	0.26	
81	0.00224	0.00066		0.18	0.28	h
82	0.00089	0.00034		0.07		h
83	0.00271	0.00060		0.22	0.09	
87	0.00065	0.00029		0.05		h
89	0.00149	0.00042		0.09		h
91	0.00080	0.00032		0.06		h
93	0.00169	0.00064		0.14	0.21	
94	0.00251	0.00061		0.20	0.31	
96	0.00454	0.00077		0.36	0.56	
98	0.00089	0.00035		0.05		h
101	0.00711	0.00099	0.095	0.63	0.97	
103	0.00679	0.00093	0.407	0.71	0.31	
104	0.00201	0.00059		0.12		
105	0.00493	0.00078	0.105	0.44	0.68	
106	0.00686	0.00102		0.55	0.24	
107	0.00547	0.00082		0.44	0.68	
109	0.00280	0.00064	−0.339	0.18	0.079	
110	0.01319	0.00122		1.06	1.64	
111	0.00366	0.00072		0.29	0.45	
114	0.00074	0.00034		0.06	0.03	h
115	0.01177	0.00117	0.746	1.44	2.24	
117	0.02551	0.00248	0.185	2.37	1.02	
118	0.00175	0.00065		0.11		h
123	0.00153	0.00057		0.09		
124	0.00298	0.00076		0.24		
126	0.00106	0.00044		0.08		
127	0.00064	0.00030		0.05	0.08	h
128	0.00200	0.00058	−0.166	0.149	0.06	
130	0.00155	0.00056		0.12		
131	0.00268	0.00080		0.21	0.33	h
132	0.01205	0.00118	0.375	1.24	0.54	
133	0.00136	0.00048		0.11	0.17	
134	0.00287	0.00089		0.23	0.10	h
136	0.00381	0.00072		0.30		
137	0.00847	0.00103		0.68	1.05	
140	0.00132	0.00051		0.08		
142	0.01218	0.00137	0.046	1.04	0.45	
144	0.00593	0.00108	0.101	0.53	0.23	
145	0.00396	0.00076		0.32	0.49	
149	0.00511	0.00107		0.41	0.18	
150	0.00737	0.00098		0.59	0.91	
151	0.00939	0.00147	0.334	0.95	0.41	
152	0.00068	0.00030		0.05	0.02	h
154	0.00339	0.00075		0.27	0.42	
156	0.05183	0.00247	0.270	3.99	1.72	
157	0.00415	0.00100		0.33	0.14	
158	0.00352	0.00080		0.28	0.44	
159	0.00155	0.00058		0.09		
160	0.00497	0.00120		0.40	0.17	
161	0.00388	0.00086		0.31	0.48	
163	0.00166	0.00060		0.10		
164	0.00222	0.00072		0.13		h
172	0.00908	0.00120		0.73	1.13	
173	0.00816	0.00143		0.65	0.28	
176	0.00444	0.00133		0.27		
177	0.03661	0.00375	0.245	3.52	1.52	
178	0.01105	0.00197		0.66		
181	0.00307	0.00104		0.25	0.11	h
183	0.00832	0.00193		0.50		
185	0.00928	0.00180		0.56		
187	0.01471	0.00236		1.18	0.51	
188	0.04542	0.00344	0.494	2.84	1.23	

Table 3. Same as Table 1, but for sources only detected in the pointing C, i.e., the merged pointings A and B.

X#	CR	ECR	*hr*	f_x	L_x	Notes
3	0.00214	0.00069		0.17	0.07	h
9	0.00115	0.00037		0.07		h
16	0.00066	0.00025		0.05	0.08	h
25	0.00074	0.00026		0.04		h
28	0.00108	0.00029		0.09	0.13	h
46	0.00106	0.00038		0.06		
47	0.00184	0.00053		0.11		
52	0.00088	0.00033		0.05		
70	0.00036	0.00015		0.02		h
71	0.00047	0.00019		0.04		h
78	0.00045	0.00018		0.03		h
79	0.00034	0.00015		0.02		h
125	0.00121	0.00037		0.07		
153	0.00426	0.00080		0.26		
166	0.00278	0.00057		0.17		h
171	0.00119	0.00042		0.07		
175	0.00160	0.00047		0.10		h
179	0.00157	0.00050		0.09		h
184	0.00393	0.00102		0.24		

Table 4. Same as Table 1, but for the HRI pointing H. Note that the HRI has no energy resolution, thus a hardness ration cannot be derived. UV in the last column indicates that a significant fraction of the HRI count rate may come from stellar UV radiation.

X#	CR	ECR	f_x	L_x	Notes
15	0.00181	0.00041	0.51	0.79	
18	0.00196	0.00052	0.41		
19	0.00297	0.00057	0.62		
20	0.00397	0.00057	0.83		
21	0.00118	0.00031	0.25		
23	0.00148	0.00034	0.31		
26	0.00105	0.00029	0.29	0.46	
27	0.00359	0.00043	1.01	1.56	
29	0.00114	0.00026	0.32	0.50	
31	0.00513	0.00042	1.44	0.62	
33	0.00118	0.00023	0.33	0.51	
38	0.00090	0.00019	0.25		
40	0.00060	0.00017	0.17	0.07	
41	0.00043	0.00015	0.12		
44	0.00124	0.00020	0.35		
45	0.00111	0.00019	0.31	0.48	
48	0.00037	0.00012	0.08		
49	0.00111	0.00022	0.31		
50	0.00143	0.00020	0.40	0.62	
54	0.00041	0.00012	0.09		
55	0.00194	0.00043	0.41		
57	0.00070	0.00017	0.20	0.30	
60	0.00346	0.00027	0.97	1.50	
61	0.00139	0.00018	0.39	0.17	UV
62	0.00045	0.00012	0.09		
63	0.00138	0.00026	0.39	0.17	
65	0.00096	0.00020	0.27	0.42	
66	0.00102	0.00016	0.29	0.44	
68	0.00307	0.00025	0.86	1.33	
69	0.00124	0.00031	0.26		
71	0.00030	0.00011	0.08		
72	0.00469	0.00030	1.31	0.57	
73	0.00057	0.00027	0.16		
74	0.00294	0.00026	0.82	1.28	
75	0.00353	0.00055	0.74		
76	0.00027	0.00009	0.08		
77	0.00029	0.00009	0.06		
80	0.00287	0.00037	0.80	0.35	UV
81	0.00137	0.00032	0.38	0.59	
83	0.00094	0.00014	0.26	0.11	
84	0.00113	0.00016	0.32	0.14	UV
85	0.00058	0.00019	0.12		
86	0.00059	0.00012	0.17		
89	0.00025	0.00009	0.05		
93	0.00088	0.00021	0.25	0.38	
94	0.00079	0.00013	0.22	0.34	
95	0.00037	0.00012	0.08		
98	0.00036	0.00013	0.08		
99	0.00029	0.00010	0.06		
100	0.00039	0.00012	0.08		
101	0.00177	0.00021	0.50	0.77	
102	0.00145	0.00020	0.41	0.18	
103	0.00249	0.00022	0.70	0.30	
104	0.00022	0.00008	0.05		
105	0.00202	0.00020	0.57	0.88	
106	0.00261	0.00027	0.73	0.32	
107	0.00151	0.00018	0.42	0.66	
109	0.00051	0.00011	0.14	0.06	
110	0.00483	0.00030	1.35	2.10	
111	0.00143	0.00018	0.40	0.62	
113	0.00028	0.00010	0.08		
115	0.00341	0.00026	0.95	1.48	
116	0.00053	0.00011	0.15	0.06	
121	0.00027	0.00009	0.08		
122	0.00023	0.00009	0.05		
123	0.00093	0.00020	0.20		
124	0.00094	0.00027	0.26		
128	0.00070	0.00014	0.20	0.09	
129	0.00025	0.00010	0.05		
132	0.00408	0.00029	1.14	0.49	
133	0.00059	0.00013	0.17	0.26	
135	0.00043	0.00015	0.09		
137	0.00252	0.00024	0.71	1.09	
138	0.00056	0.00013	0.12		
144	0.00137	0.00030	0.38	0.17	
145	0.00107	0.00018	0.30	0.46	
150	0.00358	0.00038	1.00	1.55	
154	0.00119	0.00024	0.33	0.52	
156	0.01399	0.00060	3.92	1.69	
163	0.00112	0.00035	0.24		
165	0.00096	0.00030	0.20		
168	0.00266	0.00056	0.56		
169	0.00100	0.00031	0.21		
170	0.00425	0.00064	0.89		
172	0.00243	0.00041	0.68	1.06	

Table 5. Final list of X-ray sources identified with stars attributed to cluster NGC 2451 A, yielding Williams number (W #), mean X-ray positions (J2000), offset (Δ) between X-ray and optical positions in arcsec, V magnitudes, measured $B-V$ and de-reddened $(B-V)_0$ colour indices. An asterisk indicates values from the literature used for bright stars that are overexposed in our images. Where significant variations in the X-ray flux have been found an X is written into the Var column. Spectral types are given in parentheses if estimated from the colour index. The last column gives a common star designation.

1 A1 — Obs [ABnm] A=member of NGC 2451 A, B=member of NGC 2451B m=member n=non-member 0X I3 — Xno X-ray source number 1X I3 — Wno ?Williams number

X #	W #	RA	DEC	Δ	V	$B-V$	$(B-V)_0$	Var	log L_x	log $\frac{L_x}{L_{bol}}$	Spec.	Notes
X3		7 46 09	–37 24 45	48	10.66*	0.52*	0.51		28.88	–4.92	(F8V)	
X11	256	7 45 28	–37 35 41	9	6.91*	–0.05*	–0.06		29.38	–6.01	B9V	HD 63079
X22		7 46 54	–37 43 07	10	16.72	1.52	1.51		29.27	–2.78	(M2V)	
X30		7 44 16	–37 45 59	34	13.15	1.06	1.05		29.04	–3.99	(K4V)	
X31	68	7 45 38	–37 46 39	5	11.46	0.65	0.64	X	29.91	–3.65	(G3V)	CD–37 3870
X32		7 43 55	–37 46 37	6	16.42	1.52	1.51		29.12	–3.05	(M2V)	
X40		7 45 05	–37 48 07	1	15.49	1.38	1.37		28.99	–3.31	(K8V)	
X59		7 46 29	–37 52 37	16	17.36	1.54	1.53		28.99	–2.82	(M2V)	
X61	251	7 45 05	–37 53 16	1	6.53*	–0.11*	–0.12		–	–	B3IV	HD 62991
X63	15	7 43 49	–37 53 46	1	10.57*	0.52*	0.51		29.19	–4.68	(F8V)	CD–37 3823
X72		7 45 16	–37 54 39	2	12.38	0.76	0.75	X	29.74	–3.45	(G8V)	
X80	267	7 46 10	–37 56 01	4	5.87*	–0.09*	–0.10		29.38	–6.54	B7V	HD 63215
X83		7 45 05	–37 56 35	2	15.42	1.34	1.33		28.94	–3.34	(K8V)	
X84	246	7 44 34	–37 56 36	3	5.89*	–0.10*	–0.11		–	–	B7V	HD 62893
X97		7 47 42	–37 58 43	33	11.86*	0.73*	0.72		29.20	–4.22	(G8V)	
X102		7 44 07	–37 59 24	1	16.43	1.51	1.50		29.30	–2.85	(M1V)	
X103	244	7 44 28	–37 59 16	1	8.62*	0.12*	0.11		29.55	–5.06	A3V	HD 62876
X106		7 43 54	–38 00 03	1	12.30	0.81	0.80		29.46	–3.77	(K0V)	
X108		7 46 25	–38 00 09	20	14.57	1.37	1.36		28.82	–3.88	(K8V)	
X109	46	7 44 56	–38 00 18	4	9.80*	0.54*	0.53		28.80	–5.29	(F8V)	CD–37 3853
X114		7 46 24	–38 01 04	11	12.71	0.89	0.88		28.52	–4.65	(K1V)	
X116	50	7 45 02	–38 02 24	4	10.01	0.42	0.41		28.82	–5.22	(F5V)	CD–37 3859
X117		7 48 07	–38 02 10	9	12.54	0.86	0.85		30.06	–3.09	(K1V)	
X128		7 45 05	–38 04 29	0	17.67	1.54	1.53	X	28.94	–2.79	(M2V)	
X132	47	7 44 60	–38 05 43	5	8.30*	0.15*	0.14		29.77	–4.96	A3V	HD 62974
X134	3	7 42 46	–38 05 54	23	10.84*	0.56*	0.55	X	29.42	–4.34	(F8V)	CPD–37 1499
X142	89	7 46 35	–38 06 43	4	10.01*	0.33*	0.32		29.69	–4.37	(F0V)	CD–37 3897
X144		7 43 51	–38 07 06	5	15.92	1.49	1.48		29.36	–2.93	(M1V)	
X149	94	7 46 49	–38 08 50	15	9.46*	0.43*	0.42		29.27	–5.04	(F5V)	CD–37 3902
X151		7 43 06	–38 09 19	3	15.34	1.39	1.38	X	29.65	–2.73	(M0V)	
X152		7 45 22	–38 09 51	39	13.21	0.98	0.97		28.52	–4.49	(K3V)	
X156	57	7 45 15	–38 11 50	3	11.00	0.56	0.55	X	30.31	–3.38	(F8V)	CD–37 3862
X157	233	7 43 43	–38 12 14	10	6.35*	–0.09*	–0.10		29.19	–6.51	B9Vsp	HD 62712
X160		7 47 04	–38 12 31	10	16.32	1.56	1.55		29.38	–2.93	(M3V)	
X173		7 43 52	–38 16 20	20	14.89	1.50	1.49		29.58	–3.15	(M1V)	
X177		7 48 15	–38 22 35	48	11.29	0.61	0.60		30.27	–3.32	(G0V)	
X181		7 43 58	–38 27 48	25	13.55	1.11	1.10	X	29.61	–3.21	(K4V)	
X187		7 45 50	–38 33 55	38	12.58	0.84	0.83		29.81	–3.31	(K0V)	
X188		7 44 25	–38 35 49	22	10.95*	0.61*	0.60	X	30.09	–3.64	(G0V)	

Notes on individual objects:
X61: HRI detection only; UV contamination assumed.
X63: probably non-member due to lower metallicity (Hünsch et al. ?).
X84: HRI detection only; UV contamination assumed.
X109: possibly foreground star; soft X-ray source, slightly above the main sequence, lower Li abundance (Hünsch et al. ?).
X128: flare star; X-ray parameters given for quiescent state.
X151: flare star; X-ray parameters given for quiescent state.
X156: close visual binary, not resolved in X-rays.
X177: close visual binary, not resolved in X-rays.

Table 6. Same as Table 7, but for cluster NGC 2451 B.

X #	W #	RA	DEC	Δ	V	$B-V$	$(B-V)_0$	Var	log L_x	log $\frac{L_x}{L_{bol}}$	Spec.	Notes
X7		7 45 34	–37 30 29	37	12.73	0.70	0.65		30.34	–3.21	(G5V)	
X12	18	7 43 58	–37 37 15	12	12.14	0.67	0.62		30.03	–3.76	(G2V)	
X15	243	7 44 28	–37 39 50	2	8.30*	–0.03*	–0.08	X	30.01	–5.46	B8V	HD 62875
X16	41	7 44 52	–37 40 13	15	10.70*	0.29*	0.24		28.92	–5.40	(A8V)	CD–37 3850
X17		7 45 09	–37 41 30	7	14.29	0.97	0.92		29.74	–3.28	(K2V)	
X27	69	7 45 42	–37 44 33	5	11.26	0.51	0.46	X	30.14	–3.83	(F5V)	CD–37 3871
X29		7 45 12	–37 45 11	6	13.30	0.75	0.70		29.69	–3.65	(G8V)	
X33		7 44 29	–37 46 46	3	12.76	0.68	0.63		29.67	–3.87	(G2V)	
X39		7 45 35	–37 47 59	31	12.45	0.58	0.53		29.45	–4.39	(F8V)	
X42		7 47 26	–37 48 19	4	11.50	0.45	0.40		30.37	–3.64	(F5V)	CD–37 3910
X45	61	7 45 21	–37 49 52	2	11.83	0.56	0.51		29.69	–4.20	(F8V)	CPD–37 1565
X50		7 45 29	–37 51 23	1	13.51	0.80	0.75		29.81	–3.46	(G8V)	
X56		7 45 54	–37 51 50	11	16.51	1.39	1.34		29.40	–3.02	(K8V)	
X57		7 45 34	–37 51 53	2	13.45	0.81	0.76		29.54	–3.74	(G8V)	
X60		7 44 23	–37 52 55	1	13.26	0.79	0.74		30.31	–3.05	(G8V)	
X64		7 46 09	–37 53 48	6	15.80	1.29	1.34	X	29.70	–2.99	(K8V)	
X65		7 45 46	–37 53 49	2	13.22	0.76	0.71		29.73	–3.64	(G8V)	
X66		7 45 21	–37 53 58	1	13.95	0.97	0.92	X	29.68	–3.47	(K2V)	
X68		7 44 36	–37 54 02	1	13.40	0.76	0.71	X	30.17	–3.13	(G8V)	
X74		7 44 10	–37 54 53	1	13.41	0.78	0.73		30.07	–3.23	(G8V)	
X81		7 43 25	–37 56 04	10	13.48	0.82	0.77	X	29.59	–3.69	(G8V)	
X88		7 42 60	–37 57 24	11	12.48	0.63	0.58		29.78	–3.87	(G0V)	
X93	16	7 43 50	–37 58 06	10	9.92*	0.13*	0.08		29.32	–5.13	A2V	CD–37 3825
X94	254	7 45 15	–37 58 06	1	3.64*	1.72*	1.67	X	29.78	–8.72	K2.5Ib-II	HD 63032=c Pup
X96		7 45 59	–37 58 39	5	13.54	0.89	0.84		29.82	–3.47	(K0V)	
X101	22	7 44 08	–37 59 06	9	9.37*	0.13*	0.08		30.05	–4.81	B9V	HD 62802
X105	48	7 45 01	–38 00 02	2	11.65	0.49	0.44		29.91	–4.04	(F5V)	CPD–37 1549
X107	54	7 45 10	–38 00 05	2	11.37	0.53	0.48		29.83	–4.25	(F5V)	NSV 3722
X110	124	7 44 33	–38 00 28	0	11.80	0.62	0.57		30.39	–3.52	(G0V)	
X111		7 44 19	–38 00 21	2	14.37	1.11	1.06		29.68	–3.33	(K4V)	
X112	76	7 46 02	–38 00 30	4	12.04	0.61	0.56		29.34	–4.49	(F8V)	CPD–37 1582
X115		7 45 03	–38 01 54	1	12.48	0.62	0.57		30.32	–3.33	(G0V)	
X119	2	7 42 45	–38 03 11	31	10.30*	0.28*	0.23		29.76	–4.71	(A8V)	CD–37 3810
X120		7 48 14	–38 02 56	24	12.62	0.62	0.57		29.65	–3.93	(G0V)	
X127		7 45 56	–38 04 06	8	16.95	1.33	1.28		29.92	–3.26	(K7V)	
X131		7 43 18	–38 05 43	29	13.12	0.75	0.70		29.64	–3.77	(G5V)	
X133		7 44 49	–38 05 57	2	13.49	0.75	0.70		29.34	–3.94	(G8V)	
X137		7 45 04	–38 06 09	5	12.79	0.68	0.63		30.00	–3.52	(G2V)	
X139	266	7 46 13	–38 06 11	30	8.61*	–0.08*	–0.13		29.55	–5.85	A0IV	HD 63216
X145		7 44 51	–38 08 01	2	13.62	0.89	0.84		29.62	–3.62	(K0V)	
X150		7 45 46	–38 09 12	5	13.50	0.93	0.88		30.08	–3.23	(K1V)	
X154	8	7 44 43	–38 11 03	2	13.94	0.92	0.87		29.71	–3.44	(K1V)	
X155	66	7 45 28	–38 11 32	21	11.42*	0.55*	0.50		29.30	–4.76	(F8V)	CD–37 3869
X158		7 45 09	–38 12 11	20	15.94	1.34	1.29		29.74	–2.85	(K7V)	
X161		7 46 12	–38 12 37	3	13.44	0.82	0.77		29.83	–3.47	(G8V)	
X167	35	7 44 39	–38 13 44	30	10.50*	0.20*	0.15		29.34	–5.07	(A5V)	CD–37 3843
X172	51	7 45 02	–38 14 51	4	12.48	0.67	0.62		30.04	–3.63	(G2V)	
X180	118	7 45 03	–38 26 24	53	12.18*	0.60*	0.55		29.42	–4.35	(F8V)	
X186	283b	7 47 27	–38 31 01	26	10.90*	0.47*	0.42		29.84	–4.41	F2V	HD 63465 B

Table 7. Same as Table 7, but for faint stars probably members of either of the two cluster, yet not known to which because of large errors in $B-V$. For the calculation of bolometric fluxes dependent on apparent magnitude and de-reddened colour, we assumed an average reddening of $E(B-V) = 0.05$.

X #	W #	RA	DEC	Δ	V	$B-V$	$(B-V)_0$	Var	log $\frac{L_x}{L_{bol}}$
X4		7 42 10	–37 26 47	25	18.23	1.48	1.43		–1.41
X34		7 44 17	–37 47 14	10	18.42	1.50	1.45		–2.41
X35		7 43 13	–37 47 21	25	15.70	1.38	1.33		–2.80
X36		7 44 35	–37 47 28	4	17.62	1.71	1.66		–3.22
X37		7 45 13	–37 47 30	8	17.99	1.65	1.60		–2.83
X38		7 44 49	–37 47 49	1	18.43	1.68	1.63		–2.80
X41		7 44 44	–37 48 08	6	18.06	1.71	1.66		–3.02
X44		7 44 37	–37 49 02	5	16.70	1.47	1.42		–2.78
X49		7 45 33	–37 51 23	3	17.68	1.52	1.47		–2.39
X71		7 44 18	–37 54 17	15	18.62	1.58	1.53		–2.89
X73		7 45 36	–37 54 49	12	16.91	1.59	1.54		–3.25
X76		7 44 37	–37 55 00	3	17.06	1.53	1.48		–3.26
X82		7 45 47	–37 56 19	4	18.75	1.64	1.59		–3.01
X86		7 44 26	–37 56 58	3	18.34	1.52	1.47		–2.38
X87		7 45 10	–37 57 12	2	19.08	1.56	1.51		–2.66
X91		7 46 02	–37 57 47	4	17.47	1.54	1.49		–3.23
X113		7 45 27	–38 00 53	5	18.91	1.61	1.56		–2.84
X121		7 44 36	–38 02 58	2	18.05	1.59	1.54		–3.03
X124		7 43 45	–38 03 56	6	20.25	1.69	1.64		–1.95
X126		7 45 23	–38 04 09	2	19.21	1.94	1.89		–3.24
X130		7 46 02	–38 04 44	15	16.98	1.48	1.43	X	–2.78
X136		7 45 29	–38 05 50	2	17.27	1.47	1.42		–2.49

Table 8. Same as Table 7, but for stars supposed to be non-members of the two NGC 2451 clusters. We assumed a reddening of 0.00 for stars to the right of the two cluster main sequences, 0.05 between the main sequences (X159, X182), and 0.10 to the left of the main sequences.

X #	W #	RA	DEC	Δ	V	$B-V$	$(B-V)_0$	Var	$\log \frac{L_x}{L_{bol}}$	Notes
X2		7 44 13	−37 20 55	5	10.28*	0.67*	0.67	X	−3.37	CD−37 3832
X8	78	7 46 11	−37 31 54	3	11.69	1.07	1.07		3.41	CD−37 3885
X13		7 43 12	−37 37 35	9	15.31	1.67	1.67		−3.38	
X20		7 45 10	−37 42 08	5	18.09	1.08	0.98		−1.40	
X24		7 45 39	−37 44 23	18	17.37	0.87	0.77		−2.28	
X26		7 44 23	−37 44 29	3	14.09	0.85	0.80		−3.39	
X28		7 45 12	−37 44 34	21	13.58	0.64	0.59		−4.05	
X43		7 45 27	−37 48 30	1	13.05	0.57	0.52		−4.50	
X47		7 46 11	−37 50 27	35	14.18	0.77	0.67		−3.73	
X51		7 45 09	−37 51 29	28	14.84	0.73	0.63		−3.65	
X52		7 44 18	−37 51 34	5	18.50	0.89	0.79		−2.37	
X54		7 44 49	−37 51 39	11	16.73	0.42	0.32		−2.74	
X58		7 44 38	−37 52 08	9	18.13	0.86	0.76		−2.36	
X67		7 45 08	−37 53 55	11	16.40	0.76	0.66		−3.28	
X78		7 45 24	−37 55 42	20	16.29	1.00	0.90		−3.52	
X79		7 44 42	−37 55 47	21	17.14	0.78	0.68		−3.29	
X89		7 45 19	−37 57 26	4	18.31	1.35	1.25		−2.54	
X90		7 47 07	−37 57 41	19	15.97	0.94	0.84		−2.85	
X92		7 42 55	−37 57 52	10	17.98	1.11	1.01		−2.17	
X95		7 45 32	−37 58 21	2	18.96	1.07	0.97		−2.06	
X98		7 44 19	−37 58 57	3	15.53	1.03	0.93		−3.54	
X123		7 44 04	−38 03 50	4	16.81	1.17	1.07		−2.76	
X125		7 45 10	−38 04 04	24	15.08	0.70	0.60		−3.55	
X135		7 44 21	−38 06 03	22	12.60	1.37	1.37		−4.84	
X140		7 44 38	−38 06 11	8	18.59	1.27	1.17		−2.33	
X141		7 46 25	−38 06 29	7	19.29	0.94	0.84		−1.66	
X146	238	7 44 04	−38 08 21	20	8.63*	0.96*	0.96		−6.13	HD 62782, G8III
X147	230	7 43 30	−38 08 31	3	8.37*	0.99*	0.96		−5.95	HD 62660, G8III
X148		7 44 26	−38 08 45	27	13.50	0.69	0.64		−3.76	
X153		7 43 09	−38 10 49	26	15.00	0.93	0.83		−3.06	
X159		7 45 53	−38 12 32	12	11.94	0.68	0.63		−4.58	
X162		7 46 20	−38 12 54	3	21.46	0.43	0.33		−0.56	
X163		7 45 37	−38 13 28	7	14.35	0.80	0.70		−3.45	
X164		7 44 46	−38 13 08	8	18.05	0.94	0.84		−2.16	
X166		7 44 42	−38 13 33	9	18.24	1.07	0.97		−2.02	
X170		7 44 37	−38 14 28	4	19.25	1.19	1.09		−0.99	
X171	42	7 44 49	−38 14 24	21	11.59*	0.24*	0.14		−4.90	CD−37 3848
X178		7 46 55	−38 22 42	28	15.77	1.60	1.60		−3.25	
X182	113	7 46 15	−38 27 55	44	11.52*	0.59*	0.54		−4.43	CD−38 3636
X185		7 45 23	−38 30 37	6	17.93	1.22	1.12		−1.65	