Table 1: 2MASS, IRAS and ROSAT results of Stephenson stars

object	r (')	J	ϵ_J	H	ϵ_H	K	ϵ_K	J-H	H-K_s	Spec. Type(Ref)	IRAS	ROSAT	Class of obj. (Ref)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
StHa 05	0.003	8.31	0.04	8.26	0.03	8.23	0.03	0.05	0.03	A3(1)	-	-	No-emission(1)
StHa 07	-	-	-	-	-	-	-	-	-	K2e(1)	-	$\surd$(0.133)	Ke star(1)
StHa 08	0.204	8.05	0.03	7.49	0.04	7.32	0.04	0.56	0.17	-	-	-	-
StHa 09	0.450	11.83	0.04	11.47	0.04	11.33	0.04	0.36	0.13	mid K(2)	-	-	No-emission(2)
StHa 10	-	-	-	-	-	-	-	-		Me(2)	-	$\surd$(0.130)	-
StHa 12	0.002	10.32	0.03	10.27	0.03	10.16	0.03	0.05	0.11	Be(2)	-	-	-
StHa 13	0.001	9.98	0.03	10.05	0.03	9.98	0.03	-0.07	0.07	Be(2)	-	-	-
StHa 14	0.015	10.98	0.03	10.92	0.03	10.85	0.03	0.06	0.07	B(3)	-	$\surd$(0.045)	Cataclysmic(2)
StHa 16	0.006	11.28	0.03	10.26	0.03	9.66	0.03	1.03	0.60	M0(4)	$\surd$(0.036)	$\surd$(0.116)	T Tau(4)
StHa 17	0.023	10.23	0.03	9.40	0.03	8.90	0.03	0.83	0.49	K5(4)	$\surd$(0.290)	$\surd$(0.098)	T Tau(4)
StHa 18	0.084	10.70	0.04	9.88	0.03	9.56	0.04	0.81	0.33	early M(4)	-	-	T Tau(4)
StHa 19	0.021	9.49	0.04	8.75	0.03	8.45	0.04	0.73	0.31	G8(4)	-	$\surd$(0.708)	T Tau(4)
StHa 21	0.154	10.98	0.03	10.59	0.03	10.58	0.03	0.39	0.01	G7(1)	-	-	No emission(1)
StHa 22	0.269	11.558	0.04	11.480	0.03	11.40	0.03	0.08	0.08	Be(2)	-	-	-
StHa 23	-	-	-	-	-	-	-	-		M0(3)	$\surd$(0.110)	-	-
StHa 25	0.013	9.22	0.03	8.52	0.02	8.30	0.03	0.70	0.21	Me(2)	-	$\surd$(0.174)	T Tau(4)
StHa 26	0.014	10.12	0.03	9.08	0.03	8.54	0.03	1.04	0.54	-	$\surd$(0.408)	-	T Tau(4)
StHa 27	0.011	9.76	0.03	8.88	0.03	8.31	0.04	0.88	0.56	M0(4)	$\surd$(0.261)	$\surd$(0.122)	T Tau(4)
StHa 28	0.011	9.43	0.04	8.38	0.03	7.76	0.04	1.04	0.62	M0(4)	$\surd$(0.105)	-	T Tau (4)
StHa 29	0.022	9.34	0.03	8.38	0.03	7.86	0.03	0.95	0.52	K6(4)	$\surd$(0.162)	$\surd$(0.174)	T Tau(4)
StHa 30	0.038	9.03	0.04	8.08	0.03	7.44	0.03	0.95	0.64	K7(4)	$\surd$(0.151)	$\surd$(0.067)	T Tau(4)
StHa 31	0.011	10.71	0.04	9.46	0.04	8.41	0.04	1.25	1.04	K/M(4)	$\surd$(0.103)	-	T Tau(4)
StHa 32	0.004	10.20	0.03	9.47	0.03	9.29	0.03	0.73	0.18	-	-	-	Symbiotic(2)
StHa 33	0.001	7.20	0.05	6.51	0.03	6.20	0.03	0.69	0.31	G/K(5)	-	-	T Tau(5)
StHa 34	0.162	10.71	0.04	10.06	0.03	9.75	0.03	0.65	0.30	early K(2)	-	-	T Tau(2)
StHa 36	0.204	9.47	0.03	9.01	0.03	8.89	0.03	0.46	0.12	mid K(2)	-	-	T Tau(2)
StHa 37	0.043	10.04	0.03	9.41	0.04	8.83	0.03	0.63	0.58	-	$\surd$(0.047)	-	T Tau(4)
StHa 38	0.056	11.04	0.03	10.19	0.04	9.62	0.03	0.85	0.57	-	-	-	T Tau(2)
StHa 39	0.152	9.54	0.02	8.69	0.04	8.11	0.03	0.85	0.58	mid K(2)	$\surd$(0.241)	$\surd$(0.286)	T Tau(2)
StHa 40	-	-	-	-	-	-	-	-	-	G2/K0(1)	$\surd$(0.008)	$\surd$(0.500)	T Tau(2)
StHa 41	0.002	9.02	0.03	8.44	0.07	7.99	0.05	0.58	0.45	late F(2)	$\surd$(0.046)	-	T Tau(2)
StHa 42	0.011	10.81	0.03	10.06	0.04	9.50	0.03	0.75	0.57	K5(4)	-	-	T Tau(4)
StHa 44	0.133	10.05	0.04	9.82	0.03	9.75	0.04	0.23	0.07	F7(1)	-	-	No-emission(1)
StHa 45	0.000	9.70	0.04	9.50	0.04	9.42	0.03	0.20	0.08	F7(3)	-	-	
StHa 46	0.104	8.66	0.04	8.14	0.06	8.00	0.04	0.52	0.14	G6(1)	-	-	No-emission(1)
StHa 47	-	-	-	-	-	-	-	-	-	mid K(2)	$\surd$(0.346)	-	T Tau(2)
StHa 48	0.044	10.23	0.02	9.51	0.04	9.18	0.03	0.72	0.32	K4(1)	-	$\surd$(0.029)	T Tau(1)
StHa 49	0.226	15.67	0.09	15.24	0.12	14.79	0.00	0.42	0.45	-	$\surd$(0.802)	$\surd$(0.777)	HH(6)
StHa 52	0.004	7.40	0.03	7.42	0.06	7.29	0.03	-0.02	0.12	B1.5(3)	$\surd$(0.352)	$\surd$(0.756)	Herbig Be(1)
StHa 54	0.074	10.24	0.03	9.17	0.03	8.25	0.05	1.07	0.92	-	$\surd$(0.055)	-	T Tau(7)
StHa 55	-	-	-	-	-	-	-	-	-	-	$\surd$(0.055)	-	Carbon Star(2)
StHa 56	0.016	7.76	0.04	7.16	0.03	7.01	0.03	0.59	0.15	G2(1)	-	-	No-emission(1)
StHa 57	0.051	8.17	0.04	7.36	0.03	7.07	0.04	0.81	0.29	M3(1)	-	-	No-emission(1)
StHa 58	0.001	8.56	0.03	8.43	0.03	8.38	0.04	0.14	0.05	F0(1)	-	-	No-emission(1)
StHa 59	0.001	10.08	0.03	9.89	0.03	9.84	0.04	0.19	0.05	mid F(2)	-	-	No-emission(2)
StHa 60	-	-	-	-	-	-	-	-	-	M3(3)	$\surd$(0.161)	-	-
StHa 61	0.056	9.57	0.04	9.05	0.04	8.90	0.03	0.52	0.16	G9(1)	-	-	No-emission(1)
StHa 62	0.133	12.82	0.02	12.42	0.03	11.79	0.04	0.40	0.63	BQ[ ](2)	$\surd$(0.092)	-	BQ[ ](2)
StHa 63	0.020	10.68	0.03	9.87	0.03	9.66	0.03	0.81	0.21	-	-	-	-

object	r	J	ϵ_J	H	ϵ_H	K	ϵ_K	J-H	H-K$_s$	Spec. Type(Ref)	IRAS	ROSAT	Class of obj. (Ref)
	(')												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
StHa 64	0.208	11.21	0.04	10.72	0.04	10.64	0.04	0.49	0.08	K4(1)	-	-	No-emission(1)
StHa 65	0.006	8.25	0.04	8.02	0.02	7.98	0.03	0.22	0.05	F7(1)	-	-	No-emission(1)
StHa 66	0.002	8.21	0.03	7.64	0.03	7.55	0.04	0.56	0.09	K2(3)	-	-	-
StHa 67	0.113	9.49	0.03	8.82	0.03	8.69	0.03	0.68	0.12	Ke(2)	-	$\surd(0.163)$	-
StHa 68	0.135	9.94	0.03	9.58	0.03	9.50	0.04	0.35	0.09	-	-	-	
StHa 69	0.044	7.78	0.03	6.86	0.06	6.41	0.05	0.92	0.44	late M/C(8)	$\surd(0.354)$	-	M Giant(1)
StHa 71	0.138	11.35	0.03	11.04	0.04	11.03	0.04	0.30	0.02	G1(1)	-	-	No-emission(1)
StHa 73	0.362	14.59	0.04	14.04	0.04	13.78	0.06	0.55	0.26	-	-	-	-
StHa 75	0.027	11.11	0.04	10.81	0.04	10.76	0.03	0.30	0.05	A7(1)	-	-	No-emission(1)
StHa 76	-	-	-	-	-	-	-	-	-	M3(9)	$\surd(0.152)$	-	-
StHa 77	0.152	10.77	0.03	10.55	0.04	10.47	0.02	0.21	0.08	G2(1)	-	-	No-emission(1)
StHa 82	0.333	10.37	0.04	9.88	0.05	9.72	0.04	0.49	0.16	G6(1)	-	-	No-emission(1)
StHa 83	0.255	9.99	0.03	9.29	0.03	9.13	0.03	0.69	0.16	K4(1)	-	-	No-emission(1)
StHa 85	-	-	-	-	-	-	-	-	-	galaxy	$\surd(0.068)$	-	Seyfert I (10)
StHa 86	0.074	12.14	0.04	11.31	0.06	10.72	0.05	0.82	0.59	galaxy	$\surd(0.174)$	$\surd(0.532)$	NGC 1494 (11)
StHa 87	0.048	11.37	0.04	11.24	0.03	11.17	0.03	0.13	0.07	G6(1)	-	-	No-emission(1)
StHa 88	-	-	-	-	-	-	-	-	-	M5(1)	-	$\surd(0.750)$	No-emission(1)
StHa 91	0.084	11.62	0.03	11.21	0.04	11.17	0.04	0.42	0.04	G6(1)	-	-	No-emission(1)
StHa 94	0.245	12.44	0.08	12.76	0.03	12.82	0.05	-0.32	-0.06	G (2)	-	-	No-emission(2)
StHa 95	0.001	8.65	0.03	8.16	0.03	8.03	0.03	0.49	0.13	G6(1)	-	-	No-emission(1)
StHa 97	0.092	11.24	0.03	11.01	0.03	10.94	0.03	0.23	0.07	early F(2)	-	-	No-emission(2)
StHa 99	0.202	11.04	0.03	10.88	0.03	10.84	0.03	0.17	0.03	G2(1)	-	-	No-emission(1)
StHa 100	0.090	11.56	0.03	11.31	0.03	11.25	0.04	0.25	0.06	-	-	-	No-emission(2)
StHa 101	0.353	11.12	0.03	10.71	0.03	10.62	0.03	0.42	0.09	mid G(2)	-	-	No-emission(2)
StHa 104	-	-	-		-	-	-	-	-	M3(9)	$\surd(0.421)$	-	-
StHa 105	0.013	10.96	0.03	10.54	0.04	10.43	0.04	0.42	0.10	-	-	-	-
StHa 106	0.075	8.89	0.03	8.27	0.03	8.07	0.05	0.62	0.20	-	-	-	-
StHa 107	0.003	8.50	0.03	8.23	0.03	8.20	0.04	0.27	0.03	F3(1)	-	-	No-emission(1)
StHa 108	0.002	8.02	0.03	7.53	0.03	7.44	0.03	0.49	0.10	G0(1)	-	-	No-emission(1)
StHa 110	0.119	10.69	0.03	10.38	0.03	10.27	0.03	0.31	0.11	G2(1)	-	-	No-emission(1)
StHa 112	0.304	9.25	0.03	8.95	0.04	8.86	0.03	0.30	0.09	early G(2)	-	-	No-emission(2)
StHa 113	0.167	11.45	0.03	11.14	0.03	11.04	0.03	0.31	0.11	early G(2)	-	-	No-emission(2)
StHa 114	0.002	9.15	0.03	9.01	0.03	8.97	0.03	0.14	0.04	-	-	-	-
StHa 116	0.165	7.02	0.02	6.22	0.02	6.03	0.04	0.80	0.19	M0(9)	$\surd(0.158)$	-	-
StHa 117	-	-	-		-	-	-	-	-	M3(9)	$\surd(0.140)$	-	-
StHa 118	-	-	-		-	-	-	-	-	G6(2)	$\surd(0.033)$	$\surd(0.157)$	T Tau(2)
StHa 119	-	-	-		-	-	-	-	-	M3(9)	$\surd(0.199)$	-	-
StHa 120	0.165	11.50	0.03	11.27	0.04	11.18	0.03	0.23	0.09	G(2)	-	-	No-emission(2)
StHa 121	0.145	10.72	0.03	10.39	0.04	10.30	0.02	0.33	0.09	G(2)	-	-	No-emission(2)
StHa 122	0.102	9.98	0.03	9.22	0.03	8.99	0.03	0.76	0.23	mid K(2)	$\surd(0.190)$	-	T Tau(2)
StHa 124	0.319	9.66	0.03	8.98	0.04	8.74	0.03	0.68	0.24	late K(2)	-	-	T Tau(2)
StHa 125	-	-	-	-	-	-	-	-		Me(2)	$\surd(0.004)$	-	T Tau(1)
StHa 127	-	-	-	-	-	-	-	-		K4(1)	$\surd(0.052)$	$\surd(0.127)$	T Tau(4)
StHa 128	0.035	9.76	0.03	8.70	0.06	8.11	0.04	1.05	0.59	late K(4)	-	$\surd(0.054)$	T Tau(4)
StHa 129	-	-	-	-	-	-	-	-	-	-	-	$\surd(0.511)$	T Tau(1)
StHa 130	0.020	9.14	0.03	8.38	0.05	7.96	0.04	0.77	0.41	M1.5(4)	$\surd(0.124)$	$\surd(0.048)$	T Tau(4)
StHa 131	0.060	10.51	0.02	10.26	0.03	10.18	0.03	0.25	0.08	-	-	-	-
StHa 132	0.210	11.01	0.03	10.72	0.03	10.67	0.03	0.29	0.05	G(2)	-	-	No-emission(2)
StHa 133	0.001	9.26	0.03	9.18	0.03	8.99	0.03	0.08	0.19	Be(2)	$\surd(0.830)$	-	-
StHa 134	0.002	9.08	0.03	8.98	0.04	8.93	0.03	0.09	0.05	A1(1)	-	-	No-emission(1)
StHa 135	-	-	-	-	-	-	-	-		M1(9)	$\surd(0.521)$	-	PulsV*†(9)

object	r (')	J	ϵ_J	H	ϵ_H	K	ϵ_K	J-H	H-K_s	Spec. Type(Ref)	IRAS	ROSAT	Class of obj. (Ref)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
StHa 138	-	-	-	-	-	-	-	-		late K(4)	$\surd$(0.270)	-	T Tau(4)
StHa 140	0.028	9.91	0.04	9.34	0.06	9.12	0.04	0.58	0.22	mid K(2)	-	-	No-emission(2)
StHa 141	0.265	9.66	0.03	8.62	0.07	8.34	0.03	1.04	0.30	-	-	-	Mira variable(9)
StHa 143	0.133	11.76	0.03	11.72	0.03	11.64	0.04	0.04	0.08	Be(2)	-	-	-
StHa 144	-	-	-	-	-	-	-	-	-	M4(9)	$\surd$(0.506)	-	Mira variable(9)
StHa 145	-	-	-	-	-	-	-	-	-	Be(2)	$\surd$(0.060)	-	-
StHa 146	-	-	-	-	-	-	-	-	-	M4(9)	$\surd$(0.012)	-	PulsV*†(9)
StHa 147	-	-	-	-	-	-	-	-	-	B1III(3)	$\surd$(0.024)	-	P Ne‡(12)
StHa 148	0.127	9.85	0.03	9.17	0.03	8.97	0.02	0.68	0.20	K(2)	-	-	No-emission(2)
StHa 149	0.264	8.01	0.04	7.06	0.03	6.80	0.03	0.95	0.26	M2(9)	$\surd$(0.687)	-	Symbiotic(2)
StHa 150	0.001	11.62	0.03	11.72	0.03	11.73	0.02	-0.10	-0.02	Be(2)	$\surd$(0.668)	-	-
StHa 151	0.102	9.09	0.03	8.23	0.03	7.97	0.04	0.87	0.26	M0(9)	-	-	-
StHa 152	0.005	10.39	0.04	10.26	0.03	10.15	0.04	0.13	0.10	B3III(13)	-	-	-
StHa 153	0.052	9.41	0.03	8.61	0.03	8.41	0.04	0.80	0.19	late K(2)	-	-	No-emission(2)
StHa 154	-	-	-	-	-	-	-	-	-	M2(9)	$\surd$(0.024)	-	Symbiotic(14)
StHa 155	-	-	-	-	-	-	-	-	-	M7(9)	$\surd$(0.148)	-	Giant(15)
StHa 156	0.155	11.67	0.02	11.14	0.03	10.99	0.03	0.53	0.15	K(2)	-	-	No-emission(2)
StHa 157	0.184	7.23	0.03	6.29	0.03	5.96	0.03	0.94	0.33	M2(9)	$\surd$(0.201)	-	-
StHa 161	0.001	11.01	0.03	10.88	0.03	10.74	0.04	0.12	0.14	B(3)	$\surd$(0.079)	-	P Ne‡(16)
StHa 162	-	-	-	-	-	-	-	-	-	mid M(2)	$\surd$(0.411)	-	No-emission(2)
StHa 163	0.087	8.76	0.03	7.87	0.07	7.57	0.04	0.89	0.30	M5(1)	-	-	No-emission(1)
StHa 165	0.197	7.07	0.03	6.17	0.02	5.74	0.03	0.89	0.43	mid M(2)	$\surd$(0.632)	-	M Giant(1)
StHa 166	0.154	12.01	0.03	12.04	0.03	11.96	0.03	-0.03	0.07	Be(2)	-	-	-
StHa 170	0.201	10.45	0.03	9.79	0.03	9.63	0.03	0.66	0.15	-	-	-	-
StHa 171	0.094	10.49	0.03	10.11	0.03	10.11	0.03	0.38	-0.01	-	-	-	-
StHa 172	0.001	8.32	0.03	8.15	0.05	8.06	0.04	0.17	0.09	A0(3)	-	-	-
StHa 173	-	-	-	-	-	-	-	-	-	M7(9)	$\surd$(0.086)	-	Giant(15)
StHa 174	-	-	-	-	-	-	-	-	-	M5(9)	$\surd$(0.256)	-	-
StHa 176	0.006	10.00	0.03	9.19	0.03	9.05	0.03	0.81	0.14	-	-	-	Catacysmic(17)
StHa 177	-	-	-	-	-	-	-	-	-	M7(3)	$\surd$(0.163)	-	Giant(15)
StHa 179	0.001	10.46	0.03	9.63	0.04	9.54	0.04	0.82	0.10	G(3)	-	-	Symbiotic(14)
StHa 180	0.285	9.60	0.03	8.69	0.04	8.51	0.03	0.91	0.19	-	-	-	Symbiotic(18)
StHa 182	0.052	8.66	0.04	8.05	0.03	7.82	0.04	0.62	0.23	M2(9)	-	-	-
StHa 184	0.158	11.07	0.03	11.13	0.03	11.01	0.03	-0.06	0.12	Be(2)	$\surd$(0.433)	-	-
StHa 185	-	-	-	-	-	-	-	-	-	Me(2)	$\surd$(0.213)	-	-
StHa 186	0.071	7.97	0.03	7.06	0.05	6.80	0.04	0.91	0.27	M4(9)	-	-	-
StHa 188	0.385	10.21	0.03	9.55	0.03	9.42	0.03	0.67	0.13	mid K(2)	-	-	No-emission(2)
StHa 189	0.003	7.77	0.06	7.17	0.03	6.96	0.03	0.60	0.21	B8(3)	-	-	-
StHa 190	-	-	-	-	-	-	-	-	-	-	$\surd$(0.116)	-	Symbiotic(14)
StHa 193	0.007	11.70	0.05	11.62	0.05	11.49	0.05	0.08	0.13	-	-	$\surd$(0.067)	Catacysmic(17)
StHa 195	-	-	-	-	-	-	-	-	-	M2(9)	$\surd$(0.101)	-	-
StHa 200	-	-	-	-	-	-	-	-	-	galaxy	$\surd$(0.144)	-	Seyfert I(2)
StHa 202	0.213	9.23	0.03	8.25	0.04	7.48	0.05	0.98	0.77	mid F(2)	$\surd$(0.010)	-	T Tau(2)
StHa 203	0.220	11.23	0.03	11.00	0.03	10.98	0.03	0.24	0.02	mid F(2)	-	-	No-emission(2)
StHa 204	0.002	8.70	0.03	8.76	0.03	8.73	0.03	-0.06	0.03	A0(9)	-	-	-
StHa 205	-	-	-	-	-	-	-	-	-	B9(9)	$\surd$(0.263)	-	-

† semi-regular pulsating variable star

‡ Planetary nebula

<u>*Reference*</u>

(1) This work; (2) Downes & Keyes, (1988); (3) SIMBAD Astronomical Database; (4) Herbig Bell Catalogue (1988); (5) Weaver & Hobson (1988); (6) Molinari, S & Noriega-Crespo (2002) ; (7) Torres et al. (1995); (8) Gigoyan et al. (1998); (9) Stephenson (1986); (10) Lewis (1972); (11) Allen (1976); (12) Arkhipova et al. (1999); (13) Vijapurkar (1993); (14) Munari (2002); (15) Sharples et al. (1995); (16) van de Steene & Pottasch, (1995); (17) Downes et al. (1997); (18) Belczynski et al. (2000).