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A photometric catalogue of southern emission-line stars⋆,⋆⋆

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Abstract. We present a catalogue of previously unpublished optical and infrared photometry for a sample of 162 emission-line objects and shell stars visible from the southern hemisphere. The data were obtained between 1978 and 1997 in the Walraven ($WULBV$), Johnson/Cousins ($UBV(RI)_c$) and ESO and SAAO near-infrared ($JHKLM$) photometric systems. Most of the observed objects are Herbig Ae/Be (HAeBe) stars or HAeBe candidates appearing in the list of HAeBe candidates of Thé et al. (1994), although several B[e] stars, LBVs and T Tauri stars are also included in our sample. For many of the stars the data presented here are the first photo-electric measurements in the literature. The resulting catalogue consists of 1809 photometric measurements. Optical variability was detected in 66 out of the 116 sources that were observed more than once. 15 out of the 50 stars observed multiple times in the infrared showed variability at 2.2 μm (K band).

Key words. circumstellar matter – stars: emission-line – stars: pre-main sequence – infrared: stars

1. Introduction

One of the classic characteristics of a young star is the presence of photometric variability. Several types of photometric variability can be recognized, amongst which are more or less periodic variability due to magnetic activity on the stellar surface (star spots), brightness variations due to a variable rate of accretion, and irregular large-amplitude ($>0\overset{m}{.}5$) variations due to variable circumstellar extinction (Bibo & Thé 1991; Shevchenko et al. 1993; Herbst et al. 1994; van den Ancker et al. 1998; Herbst & Shevchenko 1999). However, a detailed analysis of a star's photometric behaviour requires great amounts of data, preferably over a large period of time. In practice, sufficient data can often only be obtained by combining data sets from the literature with new data.

Herbig Ae/Be (HAeBe) stars may be one of the most interesting groups of young stars to study since they are intrinsically bright and therefore can be seen over great distances, tracing galactic regions of star formation. Furthermore, many are sufficiently bright to be observed with smaller telescopes, allowing detailed studies of their photometric behaviour to be made. A catalogue of 287 candidate members of the Herbig Ae/Be stellar group was published by Thé et al. (1994). For many of the objects in this catalogue little or no data is available and therefore a new investigation of their properties is in order.

In this *paper* we present photometry of 162 emission-line and shell stars, most of which appear in the list of HAeBe candidates by Thé et al. Names, positions and classifications of the stars are listed in Table 1. Section 2 gives a detailed description of the observations. Although a brief discussion of the data is presented in Sect. 3, we defer a detailed analysis of these data to future papers in which these data can be combined with photometry over a much longer time span.

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⋆ Based on observations collected at the European Southern Observatory, La Silla, Chile and on observations collected at the South African Astronomical Observatory.

⋆⋆ Tables 2–4 are only available in electronic form at the CDS via anonymous ftp to cdsarc.u-strasbg.fr (130.79.128.5) or via
http://cdsweb.u-strasbg.fr/cgi-bin/qcat?J/A+A/380/609

2. Observations

Photometric data in the Walraven $WULBV$ system of our programme stars were obtained between 1978 and 1988 at the 90 cm Dutch Light Collector. The data taken in 1978 were obtained when this telescope was located

Table 1. Properties of programme stars.

Name	Cat. Des.	Other	α (2000) h m s	δ (2000) ° ′ ″	Type	# Observations *WULBV*	*UBVRI*	*JHKLM*	$V_{\rm obs}$ [mag]	$V_{\rm lit}$ [mag]	Ref.
71 Cet	HD 15004		02 24 58.4	−02 46 48	A-sh	2	–	–	6.34–6.65	6.31–6.36	(1)
BU Tau	HD 23862	MWC 75	03 49 11.2	+24 08 12	Be	1	–	–	5.08	5.01–5.07	(1)
V1080 Tau	HD 283817	StHα 33	04 40 32.6	+24 26 31	HAe	2	3	–	10.10–11.68	10.29–10.56	(2)
AB Aur	HD 31293	MWC 93	04 55 45.8	+30 33 04	HAe	1	2	–	7.02–7.04	7.03–7.13	(1)
	HD 31648	MWC 480	04 58 46.3	+29 50 37	HAe	2	3	–	7.68–7.72	7.66–7.86	(1)
UX Ori	HD 293782		05 04 30.0	−03 47 14	HAe	29	13	12	9.84–11.79	9.66–11.79	(3)
V1012 Ori			05 11 36.4	−02 22 47	HAe	–	6	–	12.07–13.12	12.5–16.5pg	(2)
S22/LMC	HD 34664	MWC 105	05 13 53.1	−67 26 54	B[e]	–	3	–	11.77–12.65		
V1366 Ori	HD 34282		05 16 00.5	−09 48 35	HAe	–	3	–	9.81–9.94		
V346 Ori	HD 287841		05 24 42.8	+01 43 48	HAe	22	6	3	10.09–10.84	10.17–10.38	(3)
CO Ori	BD+11 809		05 27 38.3	+11 25 39	HFe	–	3	–	11.25–11.70	9.81–12.52	(4)
	HD 35929		05 27 42.8	−08 19 38	HFe	–	5	1	8.11–8.31		
Par 102	BD−06 1193	StHα 41	05 29 11.4	−06 08 05	HFe	–	8	3	10.43–10.54		
	BD+11 820		05 29 22.1	+11 50 50	HAe?	–	1	–	10.84		
	HD 36112	MWC 758	05 30 27.5	+25 19 57	HAe	–	2	–	8.26–8.27	8.20–8.44	(1)
HK Ori		MWC 497	05 31 28.0	+12 09 11	HFe	23	5	3	11.41–11.67	11.39–12.10	(4)
	HD 244604		05 31 57.3	+11 17 41	HAe	–	3	–	8.99–9.38	9.18–9.71	(1)
RY Ori			05 32 10.0	−02 49 49	HFe	8	4	3	11.57–12.68	11.08-12.96	(3)
EZ Ori		Par 1409	05 34 18.6	−05 04 48	TT	–	1	–	12.87	12.0–14.1pg	(2)
IX Ori		Par 1552	05 34 40.8	−05 22 43	TT	–	4	1	12.33–13.26	13.4–15.5pg	(2)
V372 Ori	HD 36917	Par 1605	05 34 47.0	−05 34 15	A-sh	10	3	3	7.98–8.00	7.98–8.03	(3)
YZ Ori		Par 1648	05 34 54:	−05 03 30:	TT	–	4	1	13.74–14.85	13.9–16.6pg	(2)
Par 1660	HD 36939		05 34 55.3	−05 30 22	HBe?	9	3	3	8.97–9.00	8.98–9.02	(3)
Par 1623	BD−05 1306		05 34 55.6	−05 16 43	A-sh	10	2	2	10.13–10.19		
KS Ori		Par 1685	05 35 00.1	−05 25 16	A-sh	10	2	1	10.05–10.12	9.7–12.0pg	(2)
V1271 Ori	HD 245185		05 35 09.6	+10 01 52	HAe	–	6	–	9.91–9.98	9.85–9.95	(3)
MR Ori			05 35 17.0	−05 21 46	A-sh	–	3	–	9.54–10.85	10.3–12.0	(2)
LZ Ori	HD 294263	Par 1854	05 35 17.8	−04 41 07	A-sh	20	1	3	9.73–10.09	10.3–11.1pg	(2)
MX Ori	BD−05 1317	Par 1953	05 35 21.3	−05 09 16	HFe	–	1	–	9.31	10.3–11.7pg	(2)
NV Ori	BD−05 1324	Par 2086	05 35 31.3	−05 33 09	HFe	6	–	2	9.63–9.90	9.78–10.35	(3)
V361 Ori	HD 37062	Par 2085	05 35 31.4	−05 25 16	B-sh	9	1	3	8.15–8.20	8.14–8.24	(3)
T Ori	BD−05 1329	MWC 763	05 35 50.4	−05 28 35	HAe	25	10	7	10.15–11.04	10.00–11.95	(3)
CQ Tau	HD 36910		05 35 58.5	+24 44 54	HFe	1	4	–	10.22–11.06	9.36–11.14	(3)
V380 Ori	BD−06 1253	MWC 765	05 36 25.4	−06 42 58	HAe	25	12	7	10.21–10.73	9.46–11.22	(4)
BN Ori	HD 245465		05 36 29.3	+06 50 02	A-sh	11	3	2	9.62–9.68	9.56–9.71	(5)
Par 2441	BD−04 1191		05 36 51.2	−04 25 40	TT	–	1	–	10.74		
V586 Ori	HD 37258	Par 2473	05 36 59.3	−06 09 16	HAe	24	8	3	9.64–10.08	9.53–10.77	(3)
BF Ori	BD−06 1259		05 37 13.3	−06 35 01	HAe	25	14	9	9.82–11.67	9.59–11.92	(3)
Par 2599	HD 37357	KMS 27	05 37 47.1	−06 42 30	HAe	–	7	2	8.83–8.84	8.83–8.91	(4)
N3Sk81		KMS 34	05 38 08.8	−06 49 13	HAe	–	6	1	13.75–13.84		
Par 2653	HD 37411		05 38 14.5	−05 25 13	HAe	2	10	1	9.76–9.85	9.79–9.81	(4)
	CD−59 1105		05 38 33.0	−59 04 28	Fe	–	1	–	9.74		
N3Sk83	=V883 Ori?	KMS 40	05 38 18.1	−07 02 26	HBe	–	1	1	14.4		
V599 Ori		KMS 49	05 38 54.4	−07 16 38	HAe	–	2	1	13.76–13.80	15.1–16.3pg	(2)
ω Ori	HD 37490	MWC 117	05 39 11.1	+04 07 17	Be	–	3	–	4.48–4.56	4.49–4.55	(1)
V350 Ori			05 40 11.6	−09 42 10	HAe	4	16	3	10.77–13.32	10.71–13.24	(3)
KMS 82			05 40 37.2	−08 04 02:	HFe?	–	4	2	11.55–14.57		
KMS 108			05 40 46.3	−08 53 48:	HBe?	–	2	1	11.19–11.21		
	HD 37806	MWC 120	05 41 02.3	−02 43 01	HAe	9	7	2	7.86–7.96	7.89–7.98	(3)
KMS 118			05 41 03.9	−09 23 18:	HFe	–	3	1	14.80–14.92		
V351 Ori	HD 38238		05 44 18.8	+00 08 40	HAe	8	2	4	8.89–9.13	8.81–10.94	(6)
FU Ori	BD+09 5427	CDS 535	05 45 22.4	+09 04 12	FUOR	2	1	–	9.09–9.32	8.02–10.06	(4)
	HD 288313		05 54 03.0	+01 40 22	TT	–	7	–	9.45–9.95		
V1307 Ori	HD 250550	MWC 789	06 02 00.0	+16 30 57	HBe	14	–	2	9.53–9.56	9.54–9.88	(3)
17 Lep	HD 41511	MWC 519	06 04 59.1	−16 29 04	A-sh	2	3	–	4.91–5.01	4.97–5.02	(1)
LkHα 208			06 07 49.4	+18 39 27	HAe	–	3	–	11.04–11.50	11.36–12.21	(4)
LkHα 339			06 10 54.4	−06 14 39	HAe	–	5	1	13.44–13.64	13.65–13.67	(4)

Table 1. continued.

Name	Cat. Des.	Other	α (2000) h m s	δ (2000) ° ′ ″	Type	# Observations $WULBV$	$UBVRI$	$JHKLM$	$V_{\rm obs}$ [mag]	$V_{\rm lit}$ [mag]	Ref.
V1308 Ori		MWC 137	06 18 45.5	+15 16 52	HBe	–	2	–	11.67–11.98	11.79–12.27	(4)
FS CMa	HD 45677	MWC 142	06 28 17.4	−13 03 11	B[e]	17	13	2	7.94–8.74	7.22–8.85	(7)
VY Mon			06 31 06.9	+10 26 05	HBe	–	3	–	12.97–13.09	12.77–14.77	(4)
V699 Mon		LkHα 215	06 32 41.8	+10 09 34	HBe	19	5	2	10.46–10.91	10.36–10.84	(2)
V700 Mon	HD 259431	MWC 147	06 33 05.2	+10 19 20	HBe	13	6	2	8.69–8.75	8.65–8.97	(1)
R Mon	BD+08 1427	MWC 151	06 39 09.9	+08 44 10	HBe	13	4	2	10.35–12.41	11.60–12.54	(4)
V590 Mon	W90	LkHα 25	06 40 44.6	+09 48 02	HFe	–	8	1	11.88–12.94	12.60–12.95	(4)
ST Pup	CD−37 3101		06 48 56.4	−37 16 33	Ceph.	–	1	–	10.31	9.28–10.68	(2)
V743 Mon	HD 50138	MWC 158	06 51 33.4	−06 57 59	B[e]	20	13	2	6.59–6.85	6.53–6.65	(1)
GU CMa	HD 52721	MWC 164	07 01 49.5	−11 18 03	HBe	1	2	–	6.50–6.57	6.52–6.71	(1)
Z CMa	HD 53179	MWC 165	07 03 43.2	−11 33 06	FUOR	19	19	6	8.68–10.27	8.61–10.22	(4)
HU CMa		LkHα 220	07 04 06.8	−11 26 07	HBe	–	3	–	11.52–11.92	11.57–12.19	(4)
V750 Mon	HD 53367	MWC 166	07 04 25.5	−10 27 16	HBe	12	4	3	6.92–7.08	7.00–7.22	(1)
NX Pup	CD−44 3318	Hen 3-32	07 19 28.3	−44 35 11	HAe	15	7	3	9.63–11.08	9.53–10.99	(3)
V694 Mon		MWC 560	07 25 51.3	−07 44 08	Symb.	–	8	–	9.96–10.33	9.10–10.10	(2)
	HD 58647		07 25 56.1	−14 10 44	A-sh	–	–	1		6.76–6.88	(1)
	HD 59319	MWC 843	07 28 36.8	−21 57 49	HBe?	–	4	–	8.29–8.31	8.19–8.47	(1)
	HD 59771		07 30 51.1	−18 15 43	Fe	–	2	–	8.89–8.94	8.83–9.31	(1)
Hen 3-40		Wray 15-30	07 31 48:	−41 34 00:	Ge	–	3	1	13.73–14.42		
PW Pup	CD−30 5135	Hen 3-83	07 49 06.0	−31 07 43	Fe	–	2	–	9.23–9.24	9.27–9.97	(1)
V402 Pup	HD 64315		07 52 20.3	−26 25 47	Oe	–	1	–	9.24	8.99–9.39	(1)
AS 202	CD−37 4833	Hen 3-174	08 32 35.8	−37 59 02	HBe?	–	1	–	10.80	9.70–10.70	(2)
ESO 313-10			08 42 17.0	−40 44 13:	HBe	–	3	1	14.24–14.59		
Hen 3-209		Wra 15-285	08 48 45.5	−46 05 08	B[e]	–	1	–	13.56		
Hen 2-14		Wra 16-30	08 51 59.5	−46 18 05:	B[e]	–	1	–	14.05		
OU Vel	HD 76534	Hen 3-225	08 55 08.7	−43 28 00	HBe	2	2	2	7.96–8.08		
RCW 34		Gum 19	08 56 27.8	−43 05 46:	O	–	2	–	11.21–11.64		
Herbst 28		Bran 215	08 58 26.3	−43 26 10	Be	–	2	1	11.25–14.76		
RCW 36		Bran 217	08 59 00.9	−43 44 10	HFe?	–	1	–	15.20		
	HD 309784	Hen 3-315	09 42 36.4	−67 08 54	B[e]	–	1	–	10.16		
	HD 85567	Hen 3-331	09 50 28.5	−60 58 03	HBe	–	33	–	8.49–8.59	8.44–8.75	(1)
	HD 87643	MWC 198	10 04 30.3	−58 39 52	B[e]	22	16	3	8.52–9.00	8.68–9.20	(3)
17 Sex	HD 88195		10 10 07.5	−08 24 29	B-sh	1	–	–	5.90	5.87–5.93	(1)
	HD 89249	MWC 200	10 16 20.6	−55 35 51	Be	–	1	1	8.90	8.70–9.15	(1)
HR Car	HD 90177	MWC 202	10 22 53.8	−59 37 28	LBV	21	11	3	7.44–8.42	7.40–8.34	(3)
Hen 3-416		Th 35-40	10 25 44.5	−58 33 52	HBe?	–	1	–	10.59		
Wra 15-566			10 25 51.7	−60 53 14	TT?	–	2	–	13.87–13.90		
V503 Car	HD 90578	Hen 3-418	10 26 00.2	−57 49 37	B[e]	–	1	–	9.33	9.08–9.75	(1)
	HD 92061	Hen 3-455	10 36 24.2	−58 57 09	HBe?	–	1	–	8.97	8.99–9.87	(1)
	CPD−59 2617	Hen 3-480	10 44 49.4	−59 49 28:	HBe?	–	–	1			
	HD 94509	Hen 3-515	10 53 27.3	−58 25 25	HBe	–	4	–	9.08–9.13	8.85–9.41	(1)
	CPD−59 2854	Wra 15-689	10 55 55.4	−60 14 20	B[e]	–	1	–	10.54		
GG Car	HD 94878	MWC 215	10 55 58.9	−60 23 33	B[e]	23	14	3	8.53–9.03	8.48–9.00	(8)
	HD 305773	CD−59 3426	10 56 03.9	−60 29 38	HBe?	–	1	–	9.08	8.80–9.39	(1)
AG Car	HD 94910	MWC 216	10 56 11.6	−60 27 13	LBV	22	11	3	6.49–7.00	6.10–8.12	(9)
HR 4329	HD 96706		11 06 49.9	−70 52 41	B-sh	2	–	–	5.58–5.59	5.54–5.60	(1)
DI Cha	CD−76 486	Hen 3-593	11 07 20.7	−77 38 07	TT	23	3	3	10.65–10.74	10.66–10.74	(10)
CU Cha	HD 97048	Hen 3-597	11 08 03.3	−77 39 17	HAe	23	9	7	8.40–8.48	8.44–8.48	(10)
	HD 97240		11 09 18.1	−77 47 40	F-sh	2	–	–	8.49–8.50	8.42–8.69	(1)
	HD 97300		11 09 50.0	−76 36 48	B-sh	–	4	1	9.02–9.08	8.97–9.03	(1)
	HD 98922	Hen 3-644	11 22 31.7	−53 22 11	HBe	2	38	–	6.72–6.81	6.72–6.83	(1)
KR Mus	HD 100546	Hen 3-672	11 33 25.4	−70 11 41	HBe	2	4	1	6.69–6.74	6.71–6.77	(3)
	HD 101412	Hen 3-692	11 39 44.5	−60 10 28	HBe	–	6	1	9.24–9.28	8.97–9.56	(1)
V644 Cen	HD 306989	Hen 3-700	11 43 06.5	−60 44 05	Be	–	1	1	10.52	9.91–10.33	(10)
DX Cha	HD 104237	Hen 3-741	12 00 05.1	−78 11 35	HAe	2	38	1	6.49–6.59	6.56–6.68	(1)
	HD 105234		12 07 05.5	−78 44 28	A-sh	2	–	–	7.48–7.48	7.45–7.59	(1)
RU Cen	HD 105578	Hen 3-755	12 09 23.8	−45 25 35	Ge	–	1	–	8.63	8.78–9.56	(1)

Table 1. continued.

Name	Cat. Des.	Other	α (2000)	δ (2000)	Type	# Observations			V_{obs}	V_{lit}	Ref.
			h m s	° ′ ″		*WULBV*	*UBVRI*	*JHKLM*	[mag]	[mag]	
Hen 3-759			12 12 08.6	−62 29 01	Be	–	1	–	10.47		
DK Cha	IRAS12496−7650		12 53 16.1	−77 07 02:	HAe	–	–	1			
V1028 Cen	CD−48 7859	Hen 3-847	13 01 17.8	−48 53 19	HAe	–	34	2	10.56–10.65		
LSS 3027B	CPD−61 3587B		13 19 04.0	−62 34 10	HBe	1	2	3	15.17–15.24		
CQ Cir	HD 130437	Hen 3-1031	14 50 50.3	−60 17 10	HBe	–	7	1	9.85–9.91		
SS73 44			15 03 23.9	−63 22 54	HBe	–	2	1	14.75–16.80		
	HD 132947		15 04 56.1	−63 07 53	HAe	–	1	–	8.91	8.73–9.12	(1)
HT Lup	CD−33 10685	Hen 3-1095	15 45 12.9	−34 17 31	TT	9	–	–	10.21–10.26	10.26–10.40	(2)
	HD 140817		15 47 04.5	−35 30 37	B-sh	2	–	–	6.83–6.84	6.77–6.90	(1)
	HD 141569		15 49 57.7	−03 55 16	HAe	–	1	–	7.10	7.11–7.14	(3)
	HD 144432	Hen 3-1141	16 06 58.0	−27 43 10	HAe	–	1	–	8.17	8.08–8.35	(1)
V856 Sco	HD 144668	HR 5999	16 08 34.3	−39 06 18	HAe	9	26	13	6.55–7.32	6.64–7.95	(3)
V1027 Sco	HD 144667	HR 6000	16 08 34.6	−39 05 34	B-sh	7	8	9	6.65–6.73	6.65–6.67	(3)
	HD 147196		16 21 19.2	−23 42 29	Be	–	5	2	7.00–7.04	7.02–7.12	(1)
Wra 15-1484		Hen 3-1191	16 27 14.2	−48 39 28	B[e]	–	44	–	12.52–13.91		
V2307 Oph	HD 150193	MWC 863	16 40 17.9	−23 53 45	HAe	3	11	1	8.80–8.88	8.79–8.87	(10)
AK Sco	HD 152404		16 54 44.8	−36 53 19	HFe	3	5	2	8.81–9.18	8.76–9.93	(3)
AS 215	HD 322422	Hen 3-1293	16 57 23.9	−40 21 40	B[e]	–	6	–	9.68–9.71	9.71–9.75	(3)
V921 Sco	CD−42 11721	MWC 865	16 59 06.9	−42 42 08	B[e]	4	7	4	11.10–11.36	11.43–11.73	(2)
V1104 Sco	HD 326823	Hen 3-1330	17 06 53.9	−42 36 40	B[e]	–	8	–	8.98–9.04	8.90–9.33	(1)
KK Oph		Hen 3-1346	17 10 08.1	−27 15 18	HAe	3	7	1	11.32–12.36	11.37–11.87	(3)
Wra 15-1651			17 14 45.6	−36 18 35:	HBe?	–	–	1			
Wra 15-1678			17 20 14.8	−37 39 35:	HBe?	–	–	1			
	HD 156702	MWC 257	17 20 50.6	−38 39 09	B[e]	–	4	–	8.70–8.72	8.58–8.83	(1)
51 Oph	HD 158643	HR 6519	17 31 25.0	−23 57 46	Be	2	7	–	4.77–4.81	4.77–4.82	(1)
XX Oph	HD 161114	MWC 269	17 43 56.5	−06 16 09	Symb.	11	5	1	8.80–9.08	8.80–9.11	(3)
	HD 163296	MWC 275	17 56 21.3	−21 57 22	HAe	8	15	4	6.82–6.93	6.82–6.93	(1)
LkHα 108			18 03 50.6	−24 21 11	HBe?	2	–	–	11.67–11.71		
V4203 Sgr	CD−24 13830	LkHα 112	18 04 22.5	−24 22 10	HBe	2	2	1	9.95–9.98	9.54–10.19	(4)
	HD 164906	MWC 280	18 04 25.8	−24 23 08	Oe	3	2	–	7.46–7.49	7.32–7.59	(1)
LkHα 115			18 04 50.4	−24 25 42	HBe?	3	2	1	11.95–11.96	10.80–12.25	(4)
LkHα 118	CD−24 13874	Hen 3-1583	18 05 49.6	−24 15 20	Be	5	6	3	11.11–11.18	10.69–11.61	(4)
LkHα 119			18 05 56:	−24 14 24:	Be	5	6	3	12.15–12.21	11.27–12.76	(4)
NZ Ser		MWC 297	18 27 39.6	−03 49 52	HBe	6	5	–	12.03–12.63	11.95–12.60	(4)
VV Ser			18 28 47.9	+00 08 40	HAe	1	4	–	11.81–12.31	11.18–13.09	(4)
V431 Sct		MWC 300	18 29 25.7	−06 04 37	B[e]	1	1	–	11.73–11.79	11.54–11.90	(4)
AS 310		MHα 375-17	18 33 21.2	−04 58 07	HBe	1	1	4	12.47–12.59	12.08–13.19	(4)
HR 7169	HD 176269		19 01 03.2	−37 03 39	B-sh	2	–	–	6.72–6.74	6.63–6.73	(1)
HR 7170	HD 176270		19 01 04.3	−37 03 42	B-sh	1	–	–	6.45	6.34–6.44	(1)
S CrA		Hen 3-1731	19 01 20:	−36 57 00:	TT	8	–	–	10.46–11.76	10.80–12.44	(4)
	HD 176386		19 01 38.9	−36 53 27	B-sh	11	6	3	7.27–7.43	7.27–7.30	(3)
TY CrA	CD−37 13024		19 01 40.8	−36 52 34	A-sh	12	6	5	9.34–9.70	9.06–9.79	(3)
R CrA	CD−37 13027	Hen 3-1733	19 01 53.7	−36 57 08	HAe	8	10	6	12.10–13.72	10.18–14.65	(4)
T CrA			19 01 58.8	−36 57 49	HFe	7	2	4	13.27–14.10	12.10–13.99	(4)
	HD 179218	MWC 614	19 11 11.3	+15 47 16	HBe	1	–	–	7.39	7.34–7.47	(1)
WW Vul	HD 344361	MWC 987	19 25 58.8	+21 12 31	HAe	10	8	–	10.48–11.68	10.25–12.40	(4)
V1295 Aql	HD 190073	MWC 325	20 03 02.5	+05 44 17	HAe	1	–	–	7.86	7.84–7.89	(10)
HR 7836	HD 195325	MWC 1019	20 30 18.0	+10 53 45	HBe?	2	–	–	5.97–6.03	6.00–6.09	(1)
Total:	162 stars					753	830	229			

Explanation of the abbreviations used: HAe/Be = Herbig Ae/Be star; HFe = F-type Herbig-like star; TT = T Tauri star; FUOR = FU Orionis type star; A-, B-sh: A- or B- type star with shell lines; Be = classical Be star; B[e] = B[e] star; Symb. = symbiotic star; Ceph. = Cepheid; LBV = Luminous Blue Variable.

References: (1) Tycho Catalogue (ESA 1997); (2) General Catalogue of Variable Stars (Kholopov et al. 1998); (3) ESO Long Term Photometry of Variables data (Manfroid et al. 1991, 1995; Sterken et al. 1993, 1995); (4) Herbst & Shevchenko (1999); (5) Shevchenko et al. (1997); (6) van den Ancker et al. (1996); (7) de Winter & van den Ancker (1997); (8) Gosset et al. (1984); (9) Sterken et al. (1996); (10) Kilkenny et al. (1985).

in Hartebeespoortdam, South Africa. All observations in later years were obtained after the telescope had been moved to the European Southern Observatory, La Silla, Chile. A detailed description of the Walraven photometric system can be found in de Geus et al. (1989), who also explain the employed measuring and data reduction procedures. All data presented here were made with a 5-channel photometer which measures all Walraven $WULBV$ intensities simultaneously, thereby avoiding any systematic effects due to non-simultaneous measurements at the different photometric passbands. A circular diaphragm with a diameter of 21$''$.5 was used for all stars. Typical errors in the data, given in $\log_{10}$ intensity values, are 0.004, 0.003, 0.004, 0.006, and 0.009 for V, $V-B$, $B-U$, $U-W$, and $B-L$, respectively. Results of the photometric measurements in the Walraven system are listed in Table 2 (only available electronically at the CDS). The last column in this table lists the corresponding V magnitude in the Johnson photometric system, computed using the transformation formula by Brand & Wouterloot (1988). Also listed in Table 2 are the date and heliocentric Julian date (JD) of each observation. In some cases, the exact universal time of individual observations proved impossible to reconstruct. In those cases, only the integer fraction of the JD is listed.

Optical photometry in the Johnson/Cousins $UBV(RI)_c$ system was obtained at La Silla with the ESO 50 cm and 1 m telescopes, during several observing runs between 1979 and 1994. Additional $UBV(RI)_c$ photometry was obtained in February 1997 at the South African Astronomical Observatory (SAAO) using the SAAO 75 cm telescope. During these observations, mostly made through a 15$''$ circular diaphragm, the telescope was equipped with a single channel photometer and either a Quantacon RCA 3103A (pre-1993) or EMI 9658RA (post-1993) photo-multiplier. The observations through U, B, V, R_c and I_c filters were made consecutively, in ascending or in descending order. Data were reduced with the Dutch method, using the E-region standard stars from the list by Graham (1982). Non-variable K and M0 standards were always included to avoid large transformation errors. Typical errors in the resulting data, listed in Table 3 (only available electronically at the CDS), are $0^m.01$, $0^m.01$, $0^m.02$, $0^m.01$, $0^m.02$ for V, $B-V$, $U-B$, $V-R$ and $V-I$, respectively. For stars fainter than 12th magnitude the errors may be twice those values. A colon following the data indicates that these particular data are more uncertain than the values listed here. Two colons indicates very uncertain data.

Near-IR photometric data in the ESO $JHKLM$ system (Bouchet et al. 1989, 1991), of the programme stars were obtained with the ESO 1 m telescope at La Silla on several occasions between 1979 and 1995. Additional Near-IR observations in the SAAO $JHKLM$ system (Carter 1990; Carter & Meadows 1995) were obtained with the 1.9 m telescope at the SAAO in 1997. During the near-IR observations, made through a 13$''$ diaphragm, the telescope was equipped with a photovoltaic InSb detector unit. Standard stars were obtained from the list by Bouchet et al. (1991). Sky subtraction was achieved by chopping, with a frequency of 8 Hz, in the east-west direction with a throw of 30$''$ amplitude. The J, H, K, L and M magnitudes were again measured consecutively, in ascending or in descending order. Typical errors in these data are $0^m.04$, $0^m.04$, $0^m.03$, $0^m.05$, $0^m.06$ for the J, H, K, L and M magnitudes, respectively. The resulting near-IR magnitudes of our programme stars are listed in Table 4 (only available electronically at the CDS).

3. Discussion

A summary of all 1809 new photometric measurements is given in the last four columns of Table 1, which list the number of obtained measurements in the Walraven, Johnson/Cousins and Near-IR photometric systems, as well as the observed range in V magnitude. Note that for some stars with a small range in V, this is entirely compatible with the expected errors in our measurements. Also listed in Table 1 is the range of photometric values found in the literature. Ranges derived from photographic rather than photo-electric data are indicated by the suffix "pg". In most cases the range observed by us is within the previously known range. In other cases (e.g. V1080 Tau), the data presented here expands the known variability range. In some objects (e.g. LkHα 339, V921 Sco) the range in V magnitude observed by us is completely out of the range known from literature. In those cases one might expect the star to show variations on time scales longer than those covered by our data.

Although a detailed analysis of all the data presented here is beyond the scope of this paper, we note that the statistical properties of the observed variations are in good agreement with previous work. Of the 116 stars with more than one measurement in Tables 2 or 3, 66 (or 57%) show variability in the V band with a magnitude exceeding $0^m.1$. This is very close to the 65% of HAeBes showing significant variations in the study by van den Ancker et al. (1998). The slightly lower fraction found here can easily be explained by the smaller number of measurements per star in the current study, causing us to not detect variability in some known variables.

In the case of near-infrared variability, literature data is much more scarce (in fact, for many of the stars the data listed in Table 4 are the first $JHKLM$ measurements in the literature). Therefore a comparison with previous work is more cumbersome. Of the 50 stars with more than one measurement in Table 4, 15 show significant ($>0^m.2$) variability in their K (2.2 μm) magnitude. Again we must caution that in view of the limited amount of measurements per star this will certainly be an underestimate of the number of near-infrared variables in our sample. In fact, in some cases the magnitudes we provide differ by more than $0^m.5$ with determinations from the literature (Gezari et al. 1999; Eiroa et al. 2001). This could indicate variability of the circumstellar disk around these objects, rather than the variable circumstellar obscuration commonly associated with large-amplitude optical brightness variations. Consequently these stars are good candidates for further studies.

The data presented here are suitable to be combined with the photometric data of the studied stars already present in the literature to perform a more detailed analysis of the photometric behaviour of the stars in our sample. However, the main value of the catalogue presented here may be for historical reference. It is well known that some young stars with well-documented historical variability (e.g. AB Aur, BN Ori, V351 Ori) have in recent years displayed a constant brightness for decades or longer. It is likely that some stars in our sample which have remained relatively constant over the time-frame studied here will become more active in years to come and vice-versa, that our variable stars may at some time cease to vary. In those cases, the information presented in Tables 2–4 will be extremely valuable in exploring the presently unknown cause of such long-term changes in photometric behaviour of young stars.

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