ASTRONOMY & ASTROPHYSICS
SUPPLEMENT SERIES

Astron. Astrophys. Suppl. Ser. **118,** 481-494 (1996)

The ROSAT all-sky survey catalogue of optically bright OB-type stars

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Received January 2; accepted February 6, 1996

Abstract. — For the detailed statistical analysis of the X-ray emission of hot stars we selected all stars of spectral type O and B listed in the Yale Bright Star Catalogue and searched for them in the ROSAT All-Sky Survey. In this paper we describe the selection and preparation of the data and present a compilation* of the derived X-ray data for a complete sample of bright OB stars.

Key words: stars: early-type — X-rays: stars

1. Introduction

The discovery of hot stars as sources of soft X-ray emission (Seward et al. 1979; Harnden et al. 1979) was one of the first results obtained with the *Einstein Observatory* (Giacconi et al. 1979). Subsequently, a larger number of bright hot stars have been observed with the *Einstein* satellite. These observations showed that many O stars as well as early B stars are soft X-ray emitters. Chlebowski et al. (1989) provided a compilation of all available *Einstein* data for O stars, whereas Grillo et al. (1992) analysed in detail the B stars observed with the *Einstein Observatory.* In the case of (optically) bright O stars the *Einstein* observations are almost complete to a limiting visual magnitude $V = 6.5$. However, in the case of the B stars, the *Einstein* data do not allow to study X-ray properties on the basis of any complete sample of stars. For a detailed discussion of X-ray emission of hot stars we refer to Hillier et al. (1993), Cassinelli et al. (1994), and Berghöfer & Schmitt (1994). The purpose of this paper is to present the X-ray data of OB stars provided by the ROSAT All-Sky Survey (RASS, Voges 1992) in a complete and systematic fashion. Here we describe our method to extract the X-ray data from the RASS and to derive the X-ray properties for our complete sample of OB stars. For an astrophysical discussion of the detailed analysis of the derived X-ray properties of OB stars we refer to the accompanying paper (Berghöfer et al. 1995).

2. ROSAT All-Sky Survey data (selection and preparation)

In 1990 the ROSAT X-ray satellite performed the first imaging all-sky survey in the soft X-ray band (0.1−2.4 keV). A detailed description of the ROSAT satellite can be found in Trümper (1983) and Trümper et al. (1991). Detailed information about the detector, the Position Sensitive Proportional Counter (PSPC), is provided by Pfeffermann et al. (1996). During the ROSAT All-Sky Survey (RASS), the sky was scanned along great circles roughly perpendicular to the direction to the Sun and through the ecliptic poles. Due to the Earth's motion relative to the Sun, the whole sky was covered in a 6 month period. The survey was carried out in such a way that scan and orbital period were identical. The RASS data on an individual source thus consist of a series of "snapshots" each of which typically lasts about 20 seconds. A more detailed discussion of the RASS data is given by, e.g., Belloni et al. (1994). Here we only want to point out that the observational technique of the RASS led to different exposure times of the sky; close to the ecliptic plane the RASS observations lasted typically 2 days, whereas the vicinity of the ecliptic poles was observed during the entire period of RASS observations. Thus, effective exposure times range between several hundreds seconds and 40000 s, the actual values for the objects discussed here, which are located near the galactic plane, range between 140 s and 1600 s.

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*Tables 2 and 3 are also available in electronic form at the CDS via anonymous ftp 130.79.128.5

Table 1. Sample stars without any RASS exposure

HR	Sp. Type	V/ mag	HR	Sp. Type	V/ mag
38	B2V	6.73	5034	B2.5Vn	6.18
809	B9Vn	5.77	5035	B3V	4.53
899	B9.5V	5.56	5151	B0.5III	6.00
1134	B5IV	5.00	5207	B9V	5.25
1200	B9.5V	6.86	5217	B5III	5.89
4679	B2.5V	4.04	5230	B9V	5.71
4806	B1Ia	6.25	5400	B7IV	6.35
4814	B8V	6.26	8723	B7III	5.74

2.1. *Selection of the OB-stars and detection in the RASS*

In order to perform a detailed statistical analysis of the X-ray emission of OB stars on the basis of a complete sample of stars we selected all stars of spectral type O and B listed in the Yale Bright Star Catalogue (BSC, Hoffleit & Warren 1991); we did not include those O and B stars in binary orbits with WR stars. The BSC contains all bright stars and is complete to a limiting visual magnitude $V = 6.5$. In total we selected 1838 stars.

Since the RASS is almost complete (sky coverage 99%), only 16 of our sample stars (∼0.9%, listed in Table 1) are not covered by any RASS observations and, therefore, had to be removed from further analysis. For every program star we selected out of the whole RASS data a $40'$ square centered on the star's optical position and ran a standard source detection algorithm on these fields. We used a maximum likelihood technique (Cruddace et al. 1988) with the option to search for an X-ray source near a given position (the optical position of our sample stars). The complete data reduction of the RASS data was carried out with the EXSAS software package (EXSAS user's guide 1994) running under ESO-MIDAS.

2.2. *X-ray source positions and offsets*

In 286 of the investigated 1822 RASS fields of $40' \times 40'$ we detected at least one X-ray source. As is obvious, if the position offset between the X-ray source and the OB star significantly exceeds the spatial resolution of the RASS data (∼$1'$), the identification of the X-ray source with the respective OB star is doubtful. Therefore, we need to determine a maximal offset within which we can reliably identify an X-ray source with an OB star. In Fig. 1 we plot the right ascension and declination position offsets of our sample stars; the drawn circle has a radius of $75''$. As is clear from Fig. 1, the bulk portion of the X-ray sources matches the optical position of the respective star within a radius of ≈$45''$. However, if we restricted our identifications to those stars showing offsets smaller than $45''$, we would miss some of the known X-ray bright O stars in the RASS data (for example ζ Pup (HD 66811), without any doubt the optical counter part of the observed X-ray source, we observe an offset of $67.7''$); we do not have any definite explanation for the observed larger offsets in the case of some of our sample stars with higher count rates (e.g., for ζ Pup about 450 counts were collected during the RASS observations) and speculate that they result from systematic uncertainties in the satellite's attitude. Another possible explanation is that some of our program stars may have X-ray emitting visual companions (note that we do not claim this for the case of ζ Pup!) which remained unresolved by the RASS observations, thus, leading to larger offsets of the X-ray source relative to the optical position of the given OB star. For a more accurate determination of the maximal offset we compare the mean number of sources per deg^2 found in the RASS (≈60000 sources/40000 deg^2 = 1.5 sources/deg^2) to the number of detected sources $N(\Delta)$ within a given maximal offset Δ per total "error" area ($N(\Delta) \cdot \pi \cdot \Delta^2$). If we allow a maximal offset of $75''$(cf. Fig. 1), we detect 216 OB stars in the RASS data and we expect only ∼0.5 background objects among this sample. This is significantly lower than the number of detected OB stars and sufficiently small for the purpose of our analysis. Therefore, we treated stars with no X-ray counterparts or X-ray counterparts with position offsets in excess of $75''$as upper limits. Nevertheless, for those stars with offsets in the range $75-150''$we also included the X-ray properties in the table of detected stars (Table 2 in Sect. 3).

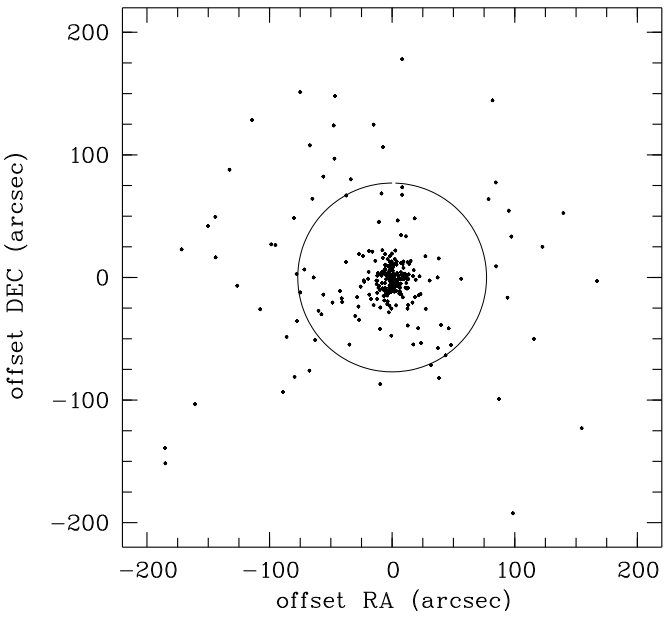

Fig. 1. Position errors in right ascension (RA) and declination (DEC) between optical and X-ray source; circle indicates our choice for a maximal offset of $75''$(see Sect. 2.2)

2.3. *X-ray fluxes and luminosities*

Formally, X-ray fluxes can be calculated by multiplying the observed count rates by an energy conversion factor (ECF) via the relation $f_{\rm x} = {\rm ECF} \cdot {\rm PSPC\ count\ rate}$. However, the ECF depends on the underlying model for the X-ray spectrum. In the case of the OB stars, the ECF mainly depends on the X-ray temperature of the emitting plasma and the interstellar absorption. Additionally, in the case of stars with higher mass loss rates, one has to take into account intrinsic absorption by outer and cooler parts of the wind which reduces the apparent X-ray flux (cf. Hillier et al. 1993, Cohen et al. 1996). This effect mainly depends on the mass loss rate $\dot{M}$ and the wind velocity v_∞. Since wind parameters are unknown for most of our program stars, we do not correct for intrinsic wind absorption of the X-ray emission. Disregarding this effect generally leads in the case of the low resolution ROSAT PSPC spectra to higher X-ray temperatures and, thus, somewhat different ECFs.

For the bulk portion of our detected program stars only a rather small number of photons was collected during the short RASS exposure times. Therefore, a detailed analysis of the spectral properties of all detected OB stars is not feasible and the spectral information provided by the RASS data is limited to the spectral hardness ratio which is defined as follows:

$$\mathrm{HR} = \frac{\mathrm{H} - \mathrm{S}}{\mathrm{H} + \mathrm{S}} \qquad (1)$$

H and S denote the source counts detected in the hard (0.5−2.0 keV) and soft (0.1−0.4 keV) energy band of ROSAT. In order to estimate the X-ray temperature from this hardness ratio, we simulated a hot, optically thin plasma (Raymond & Smith 1977) with interstellar absorption (Morrison & McCammon 1983) and calculated model hardness ratios for a grid of hydrogen absorption column densities in the range $\log(N^2_{\rm H/cm}) = 18.0 - 22.0$ and X-ray temperatures $k \cdot T_{\rm x} = 0.05 - 2.4$ keV. Together with $N_{\rm H}$ values taken from Shull & Van Steenberg (1985), Fruscione (1994), or calculated using the mean relation for galactic OB stars $N_{\rm H} = 5.9\ 10^{21}\ {\rm cm}^2 \cdot E_{B-V}$, we then used this grid to derive an X-ray temperature estimate. In Fig. 2 we compare for all of our RASS detected OB stars the observed hardness ratios with model hardness ratios for different X-ray temperatures. As is clear from Fig. 2, most of the observed OB stars show a very soft spectrum and the derived X-ray temperatures fall in the range below 0.5 keV. For further calculations we adopted an X-ray temperature of 0.5 keV for those stars not detected in the RASS data.

Additionally, we computed for the same pairs of $N_{\rm H}$ and $k \cdot T_{\rm x}$ values a grid of ECFs for the ROSAT PSPC detector response matrix to derive an ECF for the estimated X-ray temperature and the $N_{\rm H}$ value of each of our sample stars. In Fig. 3 we plot the ECF for typical

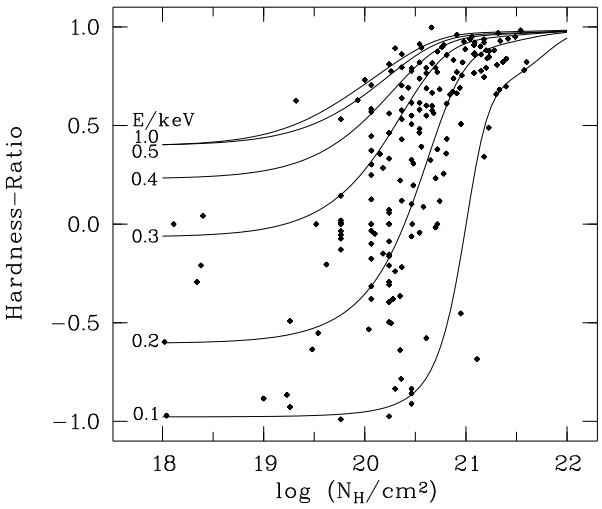

Fig. 2. Observed hardness ratios plotted versus the interstellar absorption column density; solid lines show model hardness ratios for different X-ray temperatures (see Sect. 2.3)

X-ray temperatures as a function of interstellar absorption column density.

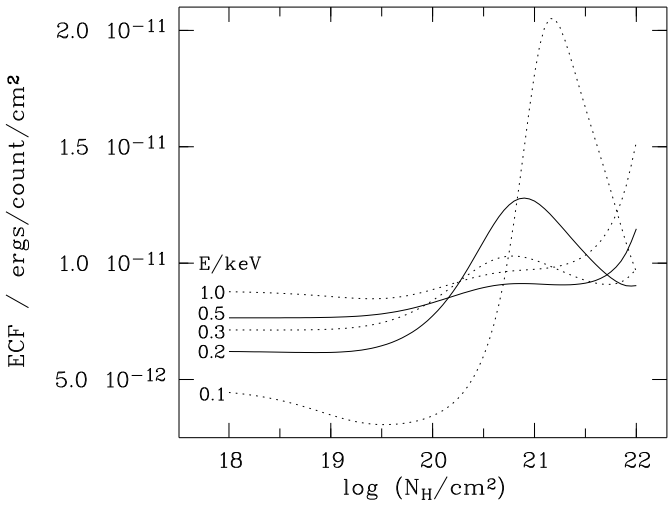

Fig. 3. ROSAT PSPC energy conversion factor ECF plotted versus hydrogen column density $\log(N_{\rm H}/{\rm cm}^2)$ for X-ray temperatures as displayed

We want to point out that the grid of ECFs has a very flat shape over a wide range of $N_{\rm H}$ and $k \cdot T_{\rm x}$ values, thus lowering the influence of the relatively large errors for the X-ray temperature estimation on the derived ECF values for our program stars. Therefore, also the influence of the disregarded intrinsic wind absorption on the ECF, which leads to somewhat overestimated temperatures, is almost negligible. The largest errors for this method of deriving the ECF occur in the case of highly absorbed stars ($\log(N_{\rm H}/{\rm cm}^2) > 21.0$). For these stars the interstellar absorption leads to a complete absorption of the X-ray

flux in the ROSAT soft energy band below 0.5 keV and the X-ray flux over the whole energy band can only be estimated by extrapolating the information provided in the hard energy band of ROSAT. In these cases we have to account for an error of about 50% for the derived ECFs. X-ray luminosities $L_{\rm x}$ were then calculated through

$$L_{\rm x} = 4\pi \cdot d^2 \cdot f_{\rm x}. \quad (2)$$

We used the following usual relations to calculate the distance d

$$m_v - M_v = 5 \cdot \log d - 5 + A_v \quad (3)$$

$$A_v = 3.3 \cdot E_{B-V}. \quad (4)$$

M_v, $(B-V)_0$, and B.C. (see below) for the respective spectral types were taken from the tables published by Schmidt-Kaler in Landolt & Börnstein (1982) and Chlebowski & Garmany (1991). The bolometric luminosities $L_{\rm Bol}$ and the ratios $L_{\rm x}/L_{\rm Bol}$ were calculated as follows:

$$M_{\rm Bol} = M_v + B.C. = 4.72 - 2.5 \cdot \log(L_{\rm Bol}/L_\odot) \quad (5)$$

$$\begin{aligned} L_{\rm Bol} &= L_\odot \cdot 10^{-\frac{M_v + B.C. - 4.72}{2.5}} \\ &= L_\odot \cdot 10^{-\frac{m_v - 5 \cdot \log d + 5 - A_v + B.C. - 4.72}{2.5}} \\ &= L_\odot \cdot d^2 \cdot 10^{-\frac{m_v - 3.3 \cdot E_{B-V} + B.C.}{2.5} - 0.112} \end{aligned} \quad (6)$$

$$L_{\rm x}/L_{\rm Bol} = \frac{4\pi \cdot f_{\rm x}}{L_\odot \cdot 10^{-\frac{m_v - 3.3 \cdot E_{B-V} + B.C.}{2.5} - 0.112}} \quad (7)$$

The calculated values of $L_{\rm x}$ and $L_{\rm x}/L_{\rm Bol}$ depend on quantities whose errors are difficult to quantify, therefore, we can only estimate a typical error. The statistical errors for the observed X-ray count rates range between ∼50% for the weakest sources and a few percent for the apparently brightest sources. Depending on the interstellar and intrinsic absorption column density towards the star, we have to account for an error in ECF of about 10%, for highly absorbed sources these errors should not exceed 50%. For the computed distances and interstellar absorption column densities we adopt a typical error of 20% and 30%, respectively. In total, the uncertainty in $L_{\rm x}$ amounts to 80−170% (0.25−0.43 dex). The calculation of $L_{\rm x}/L_{\rm Bol}$ of course does not depend on the distance, but depends strongly on the extrapolation of the visual brightness to the bolometric brightness (i.e., B.C.) for each individual star. Altogether, for the calculation of $L_{\rm x}/L_{\rm Bol}$ we have to adopt a typical error of ∼0.3 dex.

3. Results

All our detected (216) OB-stars are listed in Table 2. Additionally, the X-ray and optical properties of 21 OB stars were included for which we detected an X-ray source at a distance between $\Delta = 75 - 150''$. Due to our criterion for a secure detection ($\Delta < 75''$) these stars have to be considered as upper limits (cf. Sect. 2.2), however, for a later discussion of possible X-ray emitting visual companions we decided to include these stars in Table 2 and mark them by an asterix in Col. 11. Note that the X-ray count rate of HR 1895 (θ^1 Ori) given in Table 2 represents the integrated count rate for all X-ray sources in the center of the Orion Nebula which remained unresolved in the RASS data. For a detailed discussion of the X-ray emission in the Orion Nebula we refer to Geier et al. (1995) and Gagne et al. (1995). The column headings for Table 2 are as follows:

Column 1: Bright Star catalogue number (HR)
Column 2: star's name (taken from the BSC)
Column 3: MK spectral classification (taken from the BSC)
Column 4: V magnitude (taken from the BSC)
Column 5: $B-V$ magnitude (taken from the BSC)
Column 6: E_{B-V} in mag
Column 7: $N_{\rm H}$/atoms/cm^2 (Shull & Van Steenberg (1985), Fruscione et al. (1994),
or via $N_{\rm H} = 5.9\ 10^{21}$ cm$^{-2} \cdot E_{B-V}$;
for $E_{B-V} = 0.0$ we adopted $\log(N_{\rm H}) = 18.5$)
Column 8: distance in parsec (see Sect. 2.3)
Column 9: bolometric luminosity $L_{\rm Bol}$ in ergs/s(see Sect. 2.3)
Column 10: exposure time $T_{\rm exp}$ in seconds during the ROSAT all-sky survey
Column 11: offset between optical and X-ray position (O/X) in $''$
Column 12: mean PSPC count rate in counts/s
Column 13: error of PSPC count rate
Column 14: hardness ratio HR = (H − S)/(H + S) (see Sect. 2.3)
Column 15: error of hardness ratio; −1 for upper limit (upper limit in the H band), +1 for lower limit (upper limit in the S band), 1 for detection only in the ROSAT B band (0.1−2.4 keV)
Column 16: estimated X-ray temperature $k \cdot T_{\rm x}$ (see Sect. 2.3)
Column 17: apparent X-ray flux $f_{\rm x}$ in ergs/s/cm^2 (see Sect. 2.3)
Column 18: error of $f_{\rm x}$ in ergs/s/cm^2
Column 19: X-ray luminosity $L_{\rm x}$ in ergs/s (see Sect. 2.3)
Column 20: luminosity ratio $L_{\rm x}/L_{\rm Bol}$ (see Sect. 2.3)

Table 3 provides information on those OB stars for which we could only determine an upper limit for the X-ray flux. The column headings for Table 3 are as follows:

Column 1: Bright Star catalogue number (HR)
Column 2: MK spectral classification (taken from the BSC)
Column 3: V magnitude (taken from the BSC)
Column 4: X-ray luminosity $L_{\rm x}$ in ergs/s (see Sect. 2.3)
Column 5: luminosity ratio $L_{\rm x}/L_{\rm Bol}$ (see Sect. 2.3)

Acknowledgements. The ROSAT project has been supported by the Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie (BMBF) and the Max-Planck-Gesellschaft (MPG). We thank our colleagues from the MPE ROSAT group for their support. We also thank R. Neuhäuser who helped to write the source detection procedure.

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Table 2. Detected OB stars in the RASS (see Sect. 3)

HR	Name	SpType	V	B-V	E_{B-V}	N_H/cm^2	Dist	L_{bol}	T_{exp}	O/X	Rate	ΔRate	HR	ΔHR	T_x	f_x	Δf_x	L_x	L_x/L_{Bol}
No.			mag	mag	mag	log	pc	log	s	arcsec	PSPC cts/s				keV	log		log	log
11		B8IIIpSi	6.43	-0.14	0.00	18.50	339	36.29	382	101.2*	0.036	0.012	-0.040	0.166	0.89	-12.51	-12.87	30.62	-5.67
26	34 Psc	B9Vn	5.51	-0.07	0.01	19.76	114	35.59	583	3.3	0.182	0.019	-0.129	0.053	0.25	-11.85	-12.81	30.33	-5.26
83	π Tuc	B9V	5.51	-0.05	0.03	20.24	110	35.59	401	15.7	0.065	0.016	-0.395	0.106	0.18	-12.27	-12.79	29.89	-5.70
132	51 Psc	B9.5V	5.67	0.00	0.05	20.46	105	35.47	139	17.8	0.339	0.055	0.102	0.081	0.20	-11.44	-12.22	30.68	-4.79
264	γ Cas	B0IVe	2.47	-0.15	0.14	20.30	194	38.45	311	47.3	2.599	0.094	0.891	0.009	0.78	-10.64	-12.08	32.01	-6.44
291	σ Psc	B9.5V	5.50	-0.05	0.00	18.50	105	35.47	470	11.0	0.015	0.006	0.015	+1	0.52	-12.94	-13.25	29.18	-6.29
354		B9V	6.41	0.01	0.09	20.72	155	35.61	281	125.6*	0.034	0.014	0.160	1	0.50	-12.56	-12.80	29.90	-5.71
419		B9V+A8V	6.58	-0.04	0.04	20.37	178	35.59	434	13.7	0.034	0.011	0.154	+1	0.50	-12.48	-12.90	30.10	-5.49
481		B8IIIpSi	6.71	-0.03	0.08	20.67	339	36.28	640	118.2*	0.015	0.007	-0.357	-1	0.09	-12.90	-13.06	30.24	-6.04
522	4 Ari	B9.5V	5.84	-0.03	0.02	20.06	119	35.47	421	9.2	0.126	0.020	-0.380	0.077	0.19	-12.01	-12.76	30.22	-5.25
545	γ^1 Ari	B9V	4.83	0.07	0.15	20.95	62	35.52	313	4.4	0.020	0.010	0.093	-1	0.09	-12.50	-12.80	29.15	-6.37
612	ν For	B9.5pSi	4.69	-0.17	0.00	18.50	72	35.31	509	8.6	0.037	0.011	-0.175	0.140	0.27	-12.58	-13.08	29.21	-6.09
674	φ Eri	B8IV-V	3.56	-0.12	0.00	18.50	63	35.97	377	85.2*	0.022	0.010	-0.075	+1	0.51	-12.76	-13.05	28.92	-7.05
873	21 Per	B9pSi	5.11	-0.01	0.07	20.61	86	35.59	586	17.5	0.020	0.008	0.202	+1	0.50	-12.67	-12.97	29.28	-6.31
894		B8Vne	6.11	-0.06	0.05	20.46	169	35.87	497	23.7	0.017	0.008	0.231	+1	0.50	-12.75	-13.04	29.79	-6.09
936	β Per	B8V	2.12	-0.05	0.06	18.40	29	35.95	498	1.1	9.135	0.126	0.043	0.007	0.32	-10.18	-11.99	30.82	-5.13
1038	ξ Tau	B9Vn	3.74	-0.09	0.00	18.50	51	35.58	478	3.7	0.823	0.043	0.084	0.026	0.34	-11.23	-12.48	30.27	-5.31
1044	34 Per	B3V	4.67	-0.09	0.11	20.61	125	36.72	474	22.0	0.021	0.008	0.379	+1	0.50	-12.67	-12.96	29.60	-7.12
1070	17 Eri	B9V s	4.73	-0.09	0.00	18.50	81	35.58	200	31.2	0.043	0.019	0.309	+1	0.94	-12.42	-12.74	29.47	-6.11
1147		B9Vnn	6.10	-0.03	0.05	20.46	140	35.59	656	8.8	0.013	0.006	-0.348	+1	0.48	-12.91	-13.28	29.46	-6.13
1156	23 Tau	B6IVe	4.18	-0.06	0.09	20.72	114	36.50	369	18.3	0.020	0.009	0.542	+1	0.51	-12.65	-12.90	29.55	-6.96
1174	30 Tau	B3V+F5V	5.07	-0.13	0.07	21.18	172	36.78	369	5.9	0.045	0.013	0.342	0.135	0.08	-11.94	-12.36	30.61	-6.17
1190		B9V	4.73	-0.03	0.05	20.46	76	35.61	76	99.6*	0.092	0.041	-0.446	+1	0.48	-12.09	-12.43	29.75	-5.86
1203	ζ Per	B1Ib	2.85	0.12	0.32	20.81	394	38.69	319	10.8	0.038	0.014	0.716	+1	0.52	-12.37	-12.69	30.90	-7.80
1209	X Per	O9.5ep	6.10	0.29	0.60	21.54	465	38.52	314	5.4	2.652	0.094	0.983	0.004	1.36	-10.41	-11.26	33.00	-5.52
1220	ε Per	B0.5V+A2V	2.89	-0.18	0.10	20.47	302	38.58	523	13.2	0.070	0.014	0.000	0.100	0.19	-12.13	-12.81	30.90	-7.67
1228	ξ Per	O7.5III(n)((f))	4.04	0.01	0.32	21.06	398	38.90	468	8.0	0.220	0.024	0.902	+1	0.60	-11.61	-12.39	31.67	-7.23
1244	35 Eri	B5V	5.28	-0.15	0.02	20.06	192	36.54	322	22.0	0.031	0.013	-0.014	1	0.50	-12.68	-12.79	29.96	-6.57
1328		B9V	6.22	-0.08	0.00	18.50	160	35.59	489	11.3	0.014	0.007	0.226	+1	1.00	-12.91	-13.18	29.58	-6.01
1339	53 Tau	B9IV	5.35	-0.08	0.00	18.50	129	35.78	418	1.1	0.067	0.014	0.082	0.104	0.84	-12.25	-12.73	30.05	-5.73
1347	υ^4 Eri	B9V	3.56	-0.12	0.00	18.50	47	35.54	615	30.1	0.017	0.007	-0.251	1	0.50	-12.88	-13.22	28.54	-7.00
1372	θ Ret	B9III-IV	5.87	-0.07	0.00	18.50	179	35.90	811	25.8	0.018	0.007	-0.263	1	0.50	-12.83	-13.23	29.76	-6.14
1399	72 Tau	B7V	5.53	-0.10	0.04	20.37	158	36.12	508	14.8	0.058	0.013	0.725	+1	1.08	-12.23	-12.71	30.25	-5.87
1442		B9IVn	6.25	0.07	0.14	20.91	157	35.79	406	9.9	0.254	0.027	0.920	+1	0.61	-11.62	-12.51	30.85	-4.94
1471	HU Tau	B8V	5.92	-0.05	0.06	20.54	153	35.87	458	1.9	0.460	0.034	0.580	0.032	0.25	-11.31	-12.39	31.14	-4.73
1484	93 Tau	B8IV	5.46	-0.12	0.00	18.50	171	36.06	404	3.1	0.180	0.024	0.376	0.063	1.05	-11.80	-12.62	30.74	-5.32
1542	α Cam	O9.5Ia	4.29	0.03	0.28	21.08	1010	39.35	393	3.7	0.068	0.014	0.817	+1	0.58	-12.11	-12.57	31.98	-7.37
1622	11 Cam	B2.5Ve	5.08	-0.08	0.14	20.91	206	37.11	437	50.1	0.044	0.012	0.327	+1	0.50	-12.27	-12.61	30.44	-6.67
1657	66 Eri	B9V+A1V	5.12	-0.06	0.02	20.06	94	35.59	413	10.5	0.071	0.016	0.303	0.109	0.30	-12.22	-12.85	29.80	-5.79
1696	ι Lep	B8V	4.45	-0.10	0.01	19.76	84	35.87	403	14.4	0.864	0.048	-0.036	0.028	0.26	-11.17	-12.42	30.75	-5.12
1702	μ Lep	B9IIIpHgMn	3.31	-0.11	0.00	18.50	61	35.94	424	6.5	0.336	0.031	-0.063	0.047	0.30	-11.62	-12.64	30.02	-5.92
1712	AE Aur	O9.5V	5.96	0.22	0.53	21.30	321	38.16	357	14.7	0.031	0.011	0.319	+1	0.62	-12.13	-12.28	30.96	-7.20
1713	β Ori	B8Ia:	0.12	-0.03	0.00	18.50	278	38.56	395	53.6	0.028	0.011	0.413	+1	0.62	-12.66	-13.03	30.31	-8.25
1735	τ Ori	B5III	3.60	-0.11	0.06	20.54	132	36.87	424	22.5	0.094	0.017	0.615	0.079	0.26	-12.00	-12.66	30.32	-6.56
1756	λ Lep	B0.5IV	4.29	-0.26	0.02	20.30	457	38.22	459	3.3	0.171	0.022	-0.835	0.038	0.12	-12.04	-12.73	31.36	-6.86
1788	ε Ori	B1V+B2e	3.36	-0.17	0.09	20.70	384	38.50	317	5.1	0.063	0.016	-0.017	0.146	0.16	-12.14	-12.68	31.11	-7.39
1790	γ Ori	B2III	1.64	-0.22	0.02	19.26	93	37.59	382	2.0	0.182	0.024	-0.855	-1	0.10	-12.08	-12.88	29.93	-7.66
1791	β Tau	B7III	1.65	-0.13	0.00	18.50	43	36.46	456	24.8	0.024	0.010	-0.280	+1	0.49	-12.73	-13.04	28.61	-7.85
1803		B2.5V	6.16	-0.18	0.04	20.37	394	37.11	365	4.7	0.017	0.008	0.407	+1	0.52	-12.79	-13.06	30.48	-6.62
1821	118 Tau	B8.5V	5.47	-0.04	0.05	20.46	115	35.73	455	6.0	0.183	0.021	-0.062	0.058	0.19	-11.73	-12.60	30.47	-5.26
1839	32 Ori	B5V	4.20	-0.14	0.03	20.24	115	36.54	482	12.5	0.032	0.010	-0.163	0.147	0.20	-12.54	-13.01	29.66	-6.88
1847		B7IIIe	5.46	-0.04	0.09	20.72	215	36.46	463	15.0	0.009	0.006	-0.061	1	0.50	-13.10	-13.23	29.64	-6.82
1852	δ Ori	O9.5II	2.23	-0.22	0.08	20.18	501	39.34	478	6.5	1.667	0.060	-0.149	0.018	0.20	-10.83	-12.12	32.65	-6.69
1855	υ Ori	B0V	4.62	-0.26	0.04	20.35	494	38.33	461	3.4	0.267	0.026	-0.365	0.045	0.18	-11.63	-12.52	31.83	-6.50
1861		B1IV	5.35	-0.19	0.07	20.61	609	38.02	479	19.1	0.022	0.009	0.532	+1	0.51	-12.64	-12.93	31.01	-7.01
1875	121 Tau	B2.5IV	5.38	-0.09	0.13	20.88	343	37.35	456	8.5	0.057	0.013	0.665	+1	0.52	-12.18	-12.60	30.97	-6.38
1876	ϕ^1 Ori	B0III	4.41	-0.16	0.13	20.81	432	38.30	472	15.9	0.046	0.012	0.432	0.121	0.19	-12.23	-12.79	31.12	-7.18
1879	λ Ori	O8III((f))	3.54	-0.18	0.13	20.87	501	39.01	469	9.0	0.300	0.027	0.672	0.036	0.20	-11.42	-12.41	32.06	-6.96
1887		B0.5V	4.78	-0.25	0.03	20.24	458	38.09	469	7.2	0.139	0.020	-0.088	0.068	0.20	-11.89	-12.70	31.51	-6.58
1892	42 Ori	B1V	4.59	-0.19	0.07	20.61	325	37.83	482	28.6	0.049	0.014	0.585	+1	0.52	-12.29	-12.71	30.81	-7.03

Table 2. continued

HR No.	Name	SpType	V mag	B-V mag	E_{B-V} mag	N_H/cm^2 log	Dist pc	L_{bol} log	T_{exp} s	O/X arcsec	Rate PSPC cts/s	ΔRate	HR	ΔHR	T_x keV	f_x log	Δf_x	L_x log	L_x/L_{Bol} log
1895	θ¹ Ori	O6p	5.13	0.02	0.35	20.66	450	38.75	478	7.5	1.998	0.068	0.994	+1	0.80	-10.70	-12.17	32.68	-6.07
1898		B2.5IV	6.38	-0.14	0.08	20.67	586	37.35	487	28.0	0.021	0.009	0.198	+1	0.49	-12.64	-12.92	30.97	-6.38
1899	ι Ori	O9III	2.77	-0.24	0.07	20.30	501	39.18	470	3.1	1.727	0.063	-0.240	0.018	0.19	-10.80	-12.24	32.67	-6.51
1903	ε Ori	B0Ia	1.70	-0.19	0.04	20.48	463	39.17	495	12.1	0.885	0.044	0.197	0.025	0.20	-11.01	-12.28	32.40	-6.78
1913		B2IV-V	6.12	-0.17	0.07	20.61	535	37.48	470	19.7	0.024	0.009	0.101	+1	0.49	-12.59	-12.92	30.94	-6.54
1931	σ Ori	O9.5V	3.81	-0.24	0.07	20.56	501	38.80	504	12.8	0.392	0.030	0.393	0.037	0.22	-11.35	-12.45	32.12	-6.67
1948	ζ Ori	O9.7Ib	2.05	-0.21	0.05	20.48	501	39.34	499	7.9	1.189	0.050	0.307	0.021	0.22	-10.88	-12.25	32.60	-6.74
1996	μ Col	O9.5V	5.17	-0.28	0.03	20.04	669	38.45	597	1.5	0.126	0.017	-0.534	0.056	0.18	-12.06	-12.83	31.67	-6.78
2004	κ Ori	B0.5Ia	2.06	-0.17	0.04	20.58	567	39.06	510	4.6	0.302	0.026	0.088	0.044	0.19	-11.46	-12.47	32.12	-6.94
2030		G2IIIe+B8III	6.06	0.54	0.65	21.58	100	36.24	452	6.1	0.216	0.024	0.781	0.037	0.10	-11.48	-12.25	30.60	-5.63
2056	λ Col	B5V	4.87	-0.15	0.02	20.06	159	36.54	619	10.6	0.050	0.011	-0.034	0.106	0.23	-12.36	-13.01	30.12	-6.42
2059		B9.5IV-V	6.20	-0.02	0.03	20.24	149	35.55	595	12.3	0.014	0.007	0.207	1	0.50	-12.99	-13.08	29.44	-6.11
2127		B8V	6.59	-0.05	0.06	20.54	208	35.87	472	25.3	0.032	0.010	0.476	+1	0.51	-12.48	-12.87	30.23	-5.64
2170		B4IVe	5.83	-0.13	0.06	20.54	339	36.90	713	7.1	0.127	0.016	0.483	0.057	0.23	-11.85	-12.72	31.29	-5.61
2187		B8II	6.27	-0.15	0.00	18.50	741	37.00	980	129.0*	0.017	0.006	-0.197	1	0.50	-12.87	-13.30	30.95	-6.05
2212	δ Pic	B3III+O9V	4.81	-0.23	0.00	20.26	549	38.70	1637	8.5	0.048	0.007	-0.503	0.056	0.16	-12.45	-13.20	31.11	-6.52
2231		B6Ve	6.07	-0.13	0.02	20.06	240	36.32	494	11.6	0.017	0.007	0.410	+1	0.55	-12.84	-13.21	30.00	-6.32
2232		B3IV	6.64	-0.17	0.03	20.95	446	36.86	494	47.3	0.015	0.007	0.016	+1	0.49	-12.67	-12.86	30.70	-6.16
2284		B1Vpe	5.64	-0.02	0.24	21.14	407	37.83	559	5.2	0.030	0.009	0.803	+1	0.59	-12.43	-12.78	30.87	-6.97
2294	β CMa	B1II-III	1.98	-0.23	0.03	19.48	203	38.25	612	12.5	0.417	0.028	-0.635	0.027	0.19	-11.61	-12.61	31.09	-7.17
2370		B2V:nne	6.14	-0.08	0.16	20.70	340	37.23	465	10.1	0.024	0.010	0.584	+1	0.51	-12.57	-12.85	30.57	-6.66
2387	ξ¹ CMa	B0.5IV	4.33	-0.24	0.04	20.15	459	38.23	586	9.2	0.066	0.013	0.356	0.102	0.30	-12.23	-12.91	31.17	-7.06
2422	Plaskett	O8V+...	6.06	0.05	0.37	21.18	1514	39.35	476	18.1	0.114	0.018	0.843	+1	0.62	-11.87	-12.45	32.57	-6.78
2456	15 Mon	O7V((f))	4.66	-0.25	0.07	20.35	692	38.89	471	5.3	0.313	0.029	0.221	0.046	0.23	-11.50	-12.53	32.26	-6.63
2467		O6.5V	6.37	-0.05	0.27	21.20	1514	39.18	474	5.8	0.056	0.013	0.763	+1	0.61	-12.13	-12.52	32.30	-6.88
2509	12 CMa	B7IIIn	6.08	-0.19	0.00	18.50	328	36.38	378	42.1	0.020	0.008	0.620	+1	0.73	-12.80	-13.17	30.31	-6.07
2522		B6V	5.39	-0.10	0.05	20.46	168	36.32	320	4.5	0.033	0.011	0.583	+1	0.54	-12.50	-12.90	30.03	-6.29
2579		B8V	6.46	-0.10	0.01	19.76	212	35.87	675	6.1	0.123	0.015	0.008	0.063	0.27	-12.02	-12.91	30.71	-5.16
2618	ε CMa	B2II	1.50	-0.21	0.02	18.02	187	38.16	516	7.8	0.514	0.033	-0.597	0.027	0.20	-11.50	-12.69	31.13	-7.04
2678	FN CMa	B0.5IV	5.39	0.05	0.33	21.18	692	38.55	471	23.0	0.030	0.010	0.490	+1	0.59	-12.28	-12.51	31.47	-7.07
2680		B3V	6.34	-0.16	0.04	20.37	365	36.89	447	13.6	0.020	0.008	0.064	+1	0.49	-12.72	-13.05	30.48	-6.41
2694		O6.5V	6.21	0.03	0.35	21.23	1318	39.23	447	12.4	0.032	0.010	0.697	+1	0.62	-12.31	-12.59	32.01	-7.22
2756		B3V	5.36	-0.17	0.03	20.24	236	36.89	421	70.3	0.018	0.010	-0.040	1	0.50	-12.87	-12.95	29.95	-6.94
2781	29 CMa	O7Ia:fp	4.98	-0.15	0.16	20.81	1514	39.44	382	7.0	0.028	0.010	0.222	+1	0.49	-12.49	-12.78	31.95	-7.49
2782	τ CMa	O9Ib	4.40	-0.15	0.13	20.74	1514	39.50	370	35.0	0.102	0.019	0.684	+1	0.23	-11.92	-12.59	32.52	-6.98
2806		O9V	6.43	-0.19	0.12	20.96	1247	38.64	386	12.7	0.043	0.012	0.754	+1	0.51	-12.26	-12.58	32.01	-6.63
2844		B9pHgMn	5.72	-0.10	0.00	18.50	127	35.57	433	3.5	0.102	0.017	-0.082	0.086	0.30	-12.10	-12.85	30.19	-5.38
2875		B5Vp	5.43	-0.16	0.01	19.76	209	36.54	280	11.1	0.519	0.045	-0.980	-1	0.07	-11.81	-12.78	30.91	-5.63
3055		B0III	4.11	-0.18	0.11	20.80	589	38.67	448	2.1	0.113	0.018	0.358	0.081	0.18	-11.83	-12.63	31.79	-6.88
3089		B1.5Vp	4.63	-0.23	0.02	20.35	470	38.00	668	6.9	0.035	0.009	-0.278	-1	0.12	-12.62	-12.79	30.80	-7.20
3090	J Pup	B0.5Ib	4.24	-0.14	0.08	20.26	1058	38.78	563	4.1	0.027	0.008	0.550	+1	0.56	-12.63	-13.11	31.50	-7.28
3117	χ Car	B3IVp	3.47	-0.18	0.02	20.74	105	36.86	891	3.3	0.048	0.009	0.117	0.097	0.16	-12.22	-12.93	29.90	-6.97
3129	V Pup	B1Vp+B3IV:	4.41	-0.17	0.09	20.54	290	37.83	731	18.5	0.052	0.011	0.463	0.093	0.23	-12.23	-12.88	30.77	-7.07
3165	ζ Pup	O5If	2.25	-0.26	0.07	20.00	437	39.57	444	67.7	1.096	0.052	0.732	0.017	0.74	-11.03	-12.23	32.33	-7.24
3192	16 Pup	B5IV	4.40	-0.15	0.02	20.06	161	36.71	352	7.5	0.112	0.020	0.446	0.086	0.88	-11.97	-12.54	30.52	-6.19
3283		B2IV-V	5.20	-0.19	0.05	20.46	361	37.48	508	42.9	0.071	0.014	0.550	0.090	0.28	-12.14	-12.77	31.05	-6.43
3327		B9V	6.53	-0.09	0.00	18.50	186	35.60	480	127.5*	0.120	0.019	0.147	0.077	0.80	-12.00	-12.57	30.62	-4.98
3413		B8Si	5.80	-0.13	0.00	18.50	158	35.85	948	4.8	0.097	0.012	0.205	0.059	0.79	-12.09	-12.73	30.38	-5.46
3435		B8Vn	6.47	-0.10	0.01	19.76	213	35.87	745	12.7	0.013	0.006	0.144	0.106	0.31	-13.00	-13.35	29.73	-6.14
3439		B9V	5.20	-0.01	0.07	20.61	90	35.59	559	31.2	0.022	0.009	-0.578	0.421	0.10	-12.72	-12.89	29.27	-6.32
3447		B3IV	3.62	-0.18	0.02	20.06	155	37.14	733	72.1	0.036	0.010	0.138	+1	0.51	-12.50	-13.08	29.96	-7.19
3466		B8Si	5.52	-0.15	0.00	18.50	139	35.82	732	57.9	0.055	0.011	0.317	0.100	1.14	-12.31	-12.95	30.06	-5.76
3467		B3IV	4.86	-0.17	0.03	20.24	270	37.14	736	125.5*	0.055	0.011	0.310	0.100	0.26	-12.29	-12.95	30.65	-6.49
3500	14 Hya	B9pHgMn	5.31	-0.09	0.00	18.50	105	35.58	337	9.2	0.115	0.021	-0.054	0.094	0.31	-12.08	-12.80	30.04	-5.54
3525		B1-2III	6.00	-0.10	0.15	20.94	858	38.03	613	5.9	0.033	0.010	0.382	+1	0.51	-12.37	-12.68	31.57	-6.46
3630	19 Hya	B9.5III	5.60	-0.06	0.00	18.50	150	35.80	384	13.3	0.026	0.010	0.035	-1	0.19	-12.71	-13.08	29.72	-6.07
3659	V357 Car	B2IV-V	3.44	-0.19	0.05	20.78	138	37.35	322	4.8	0.109	0.021	0.256	0.102	0.17	-11.85	-12.56	30.51	-6.84
3665	θ Hya	B9.5V	3.88	-0.06	0.00	18.04	37	35.20	380	25.0	0.144	0.022	-0.942	-1	0.09	-12.01	-12.33	29.20	-6.00
3674		B4V	5.25	-0.14	0.05	20.46	195	36.69	588	18.1	0.017	0.007	0.014	+1	0.49	-12.78	-13.10	29.87	-6.82
3753		B6V	5.11	-0.11	0.04	20.37	150	36.32	392	26.2	0.028	0.011	-0.139	+1	0.48	-12.59	-12.98	29.84	-6.48

Table 2. continued

HR No.	Name	SpType	V mag	B-V mag	E_{B-V} mag	N_H/cm^2 log	Dist pc	L_{bol} log	T_{exp} s	O/X arcsec	Rate PSPC cts/s	ΔRate	HR	ΔHR	T_x keV	f_x log	Δf_x	L_x log	L_x/L_{Bol} log
3849	κ Hya	B5V	5.06	-0.15	0.02	20.06	173	36.54	479	16.6	0.024	0.010	-0.139	1	0.50	-12.79	-12.91	29.77	-6.77
3856		B9IV-V	4.52	-0.07	0.00	18.50	80	35.69	238	65.7	0.029	0.014	0.180	+1	1.05	-12.59	-12.86	29.29	-6.40
3858		B6Ve	4.77	-0.12	0.03	20.24	130	36.32	465	0.1	0.035	0.011	0.333	0.130	0.27	-12.49	-12.97	29.82	-6.50
3860	ζ Cha	B5V	5.11	-0.14	0.03	20.24	175	36.54	450	25.7	0.035	0.012	0.058	0.164	0.23	-12.48	-12.95	30.08	-6.46
4118	δ Ant	B9.5V	5.56	-0.04	0.01	19.76	106	35.47	380	22.1	0.031	0.013	0.065	+1	0.52	-12.59	-12.95	29.53	-5.93
4185		B9pSi	5.52	-0.16	0.00	18.50	116	35.49	318	8.8	0.048	0.016	0.065	+1	0.53	-12.42	-12.84	29.78	-5.70
4199	θ Car	B0Vp	2.76	-0.22	0.08	20.28	207	38.37	308	2.9	0.378	0.038	-0.379	0.048	0.18	-11.50	-12.37	31.21	-7.16
4205		B5Vn	4.82	-0.13	0.04	20.37	151	36.54	318	7.5	0.037	0.013	0.278	+1	0.51	-12.45	-12.84	29.99	-6.55
4467	λ Cen	B9III	3.13	-0.04	0.03	20.24	53	36.00	415	16.9	0.213	0.025	-0.951	-1	0.07	-12.15	-12.72	29.38	-6.61
4583	ε Cha	B9Vn	4.91	-0.06	0.02	20.06	85	35.59	707	101.7*	0.021	0.006	0.337	+1	0.54	-12.75	-13.27	29.18	-6.41
4743	σ Cen	B2V	3.91	-0.19	0.05	19.32	173	37.39	393	1.5	0.035	0.011	0.252	+1	1.08	-12.52	-12.94	30.04	-7.35
4757	δ Crv	B9.5V	2.95	-0.05	0.00	18.38	31	35.43	256	12.6	0.064	0.019	-0.210	0.144	0.27	-12.35	-12.84	28.71	-6.72
4817		B8II/III	4.64	-0.08	0.03	20.24	218	36.65	362	6.2	0.026	0.010	-0.075	+1	0.49	-12.62	-12.99	30.13	-6.51
4853	β Cru	B0.5III	1.25	-0.23	0.05	20.46	147	38.43	84	71.3	0.311	0.066	-0.717	-1	0.09	-11.77	-12.06	30.65	-7.78
4890	κ Cru	B5Ia	5.90	0.20	0.28	21.21	2463	38.65	174	50.6	0.041	0.021	0.683	+1	0.60	-12.21	-12.39	32.65	-6.00
4940		B5V	4.71	-0.14	0.03	20.24	145	36.54	311	21.0	0.219	0.029	0.072	0.066	0.22	-11.68	-12.55	30.72	-5.82
4942	ξ^2 Cen	B1.5V	4.27	-0.19	0.06	20.54	237	37.60	353	53.6	0.027	0.011	0.640	+1	0.53	-12.57	-12.89	30.26	-7.35
4944		B9IV+F8-G2	5.99	0.48	0.55	21.50	62	35.63	155	100.7*	0.184	0.038	0.258	0.102	0.05	-11.29	-11.97	30.37	-5.25
4951		B8V	5.71	-0.07	0.04	20.37	143	35.87	246	25.9	0.107	0.025	0.119	0.118	0.22	-11.97	-12.59	30.42	-5.45
4993	η Mus	B8V	4.80	-0.08	0.03	20.24	96	35.87	199	39.4	0.060	0.020	0.005	-1	0.14	-12.36	-12.49	29.68	-6.19
5056	α Vir	B1III-IV+B2V	0.98	-0.23	0.03	19.00	86	37.99	349	6.0	1.142	0.060	-0.884	0.013	0.15	-11.31	-12.36	30.63	-7.36
5121		B8V	5.90	-0.12	0.00	18.50	166	35.86	178	12.3	0.047	0.020	-0.028	1	0.50	-12.42	-12.78	30.10	-5.76
5223		B2IIIe	6.10	-0.07	0.17	20.99	776	37.85	202	153.4*	0.071	0.022	0.461	+1	0.52	-12.03	-12.33	31.82	-6.02
5267	β Cen	B1III	0.61	-0.23	0.03	19.54	85	38.10	381	9.0	1.085	0.055	-0.553	0.022	0.19	-11.16	-12.27	30.78	-7.32
5407	52 Hya	B8V	4.97	-0.07	0.04	20.37	102	35.88	253	144.9*	0.087	0.023	0.715	+1	1.10	-12.05	-12.47	30.05	-5.83
5412		B8Vn	5.50	-0.08	0.03	20.24	132	35.87	359	85.8*	0.065	0.016	-0.307	0.116	0.19	-12.25	-12.79	30.07	-5.80
5413		A1V+B	5.37	0.05	0.04	20.37	70	35.17	344	6.6	0.153	0.024	-0.218	0.074	0.19	-11.85	-12.60	29.93	-5.24
5469	α Lup	B1.5III/Vn	2.30	-0.20	0.05	20.46	130	37.80	352	13.6	0.086	0.018	-0.823	-1	0.08	-12.37	-12.72	29.94	-7.86
5501	108 Vir	B9.5V	5.69	-0.03	0.02	20.06	111	35.47	356	9.0	0.015	0.009	0.169	+1	0.52	-12.89	-13.13	29.28	-6.19
5576	κ Cen	B2IV	3.13	-0.20	0.04	19.93	118	37.29	344	17.2	0.079	0.018	0.256	+1	0.53	-12.18	-12.80	30.04	-7.25
5586	δ Lib	B9.5V	4.92	0.00	0.05	20.46	74	35.47	346	81.4*	0.105	0.021	0.555	+1	0.53	-11.99	-12.57	29.83	-5.64
5624		B8IVSi	5.79	-0.14	0.00	18.50	199	36.04	354	35.2	0.053	0.017	-0.107	+1	0.51	-12.38	-12.81	30.29	-5.75
5653		B8V	6.10	-0.08	0.03	20.24	174	35.87	348	13.5	0.019	0.009	0.056	1	0.50	-12.86	-12.96	29.70	-6.18
5655		B9	6.47	-0.04	0.04	20.37	169	35.59	338	8.7	0.032	0.014	0.591	+1	0.55	-12.53	-12.86	30.00	-5.59
5664	δ Cir	O8.5V	5.09	-0.06	0.26	21.18	615	38.77	432	14.7	0.069	0.015	0.875	+1	0.64	-12.11	-12.65	31.54	-7.23
5680		O7.5III((f))	5.46	-0.10	0.21	21.08	1055	39.03	418	8.7	0.046	0.013	0.724	+1	0.56	-12.23	-12.56	31.89	-7.14
5683	μ Lup	B8Ve	4.27	-0.08	0.03	20.10	78	35.91	383	29.6	0.144	0.022	-0.049	0.076	0.23	-11.90	-12.69	29.97	-5.94
5695	δ Lup	B1.5IV	3.22	-0.22	0.03	20.18	212	37.83	391	15.9	0.040	0.012	0.286	0.148	0.27	-12.44	-12.93	30.30	-7.53
5776	γ Lup	B2IV	2.78	-0.20	0.04	20.23	141	37.58	419	99.9*	0.029	0.012	0.131	0.162	0.23	-12.56	-12.96	29.81	-7.77
5781		B3IVp	4.54	-0.18	0.02	20.06	237	37.14	375	64.8	0.054	0.016	-0.099	0.143	0.22	-12.34	-12.84	30.49	-6.65
5839	ψ^2 Lup	B5V	4.75	-0.14	0.03	20.24	148	36.54	434	5.1	0.068	0.015	-0.293	0.106	0.19	-12.22	-12.79	30.19	-6.34
5846		A0V+B	5.94	0.00	0.02	20.06	113	35.35	409	12.8	0.085	0.018	0.249	0.104	0.28	-12.13	-12.80	30.05	-5.30
5883	χ Lup	B9IV	3.95	-0.04	0.03	20.24	65	35.79	398	5.7	0.134	0.022	-0.154	0.083	0.20	-11.91	-12.62	29.79	-6.01
5902	λ Lib	B2.5V	5.03	-0.01	0.21	21.09	181	37.10	464	6.4	0.029	0.010	0.735	+1	0.57	-12.44	-12.74	30.15	-6.95
5915	47 Lib	B5V	5.94	-0.01	0.16	20.97	210	36.54	460	3.9	0.044	0.012	0.640	+1	0.52	-12.28	-12.64	30.44	-6.10
5948	η Lup	B2.5IV	3.41	-0.22	0.00	20.04	170	37.35	355	111.2*	0.065	0.017	0.268	0.124	0.30	-12.26	-12.82	30.28	-7.07
5953	δ Sco	B0.3IV	2.32	-0.12	0.16	21.08	153	38.24	379	23.4	0.046	0.014	0.533	+1	0.55	-12.19	-12.46	30.26	-7.98
5984	β^1 Sco	B1V	2.62	-0.07	0.19	21.09	161	38.17	411	8.6	0.154	0.022	0.714	+1	0.56	-11.72	-12.19	30.77	-7.40
5988		B8p	5.92	-0.08	0.03	20.24	160	35.87	437	8.4	0.049	0.014	0.622	+1	1.16	-12.30	-12.69	30.19	-5.68
6028	13 Sco	B2V	4.59	-0.16	0.08	20.67	222	37.37	346	14.7	0.025	0.011	0.333	+1	0.50	-12.56	-12.83	30.21	-7.17
6029	12 Sco	B9V	5.67	0.01	0.09	20.72	108	35.59	330	6.3	0.149	0.025	0.379	0.080	0.19	-11.74	-12.52	30.41	-5.18
6042		B5V	6.41	0.04	0.21	21.09	241	36.54	376	8.1	0.046	0.015	0.842	+1	0.59	-12.28	-12.66	30.56	-5.97
6054		B7IV	6.05	0.04	0.17	20.99	208	36.31	340	43.7	0.073	0.018	0.774	+1	0.54	-12.07	-12.48	30.64	-5.67
6084	σ Sco	B1III	2.89	0.13	0.39	21.28	138	38.08	456	9.1	0.042	0.012	0.762	+1	0.66	-12.22	-12.57	30.14	-7.95
6112	ρ Oph	B2IV	5.02	0.24	0.48	21.60	211	37.62	491	23.2	0.040	0.012	0.644	+1	0.80	-12.13	-12.49	30.60	-7.02
6155	μ Nor	B0Ia	4.94	0.05	0.28	21.15	1187	39.01	326	8.3	0.042	0.014	0.720	+1	0.58	-12.25	-12.54	31.98	-7.03
6164	V918 Sco	O9Ia	5.47	0.40	0.67	21.40	1380	39.71	319	8.5	0.053	0.015	0.679	+1	0.72	-12.04	-12.37	32.31	-7.39
6165	τ Sco	B0V	2.82	-0.25	0.05	20.43	236	38.42	356	11.7	1.528	0.068	0.692	0.017	0.33	-10.84	-12.09	31.99	-6.44
6167		B7Vn	6.18	-0.08	0.06	20.54	207	36.12	226	15.6	0.049	0.021	-0.044	+1	0.18	-12.27	-12.61	30.44	-5.68
6175	ζ Oph	O9.5Vn	2.56	0.02	0.33	20.78	154	38.62	477	5.5	0.321	0.027	0.908	+1	0.40	-11.52	-12.56	30.93	-7.68

Table 2. continued

HR No.	Name	SpType	V mag	B-V mag	E_{B-V} mag	N_H/cm^2 log	Dist pc	L_{bol} log	T_{exp} s	O/X arcsec	Rate PSPC cts/s	ΔRate	HR	ΔHR	T_x keV	f_x log	Δf_x	L_x log	L_x/L_{Bol} log
6184	16 Dra	B9.5Vn	5.53	-0.07	0.00	18.50	100	35.46	551	64.0	0.090	0.016	-0.904	-1	0.09	-12.24	-12.59	29.84	-5.63
6187		O5III(f)	5.65	0.13	0.45	21.42	1225	39.55	347	1.2	0.618	0.045	0.941	0.015	0.26	-11.21	-12.07	33.05	-6.51
6260		B0.5Ia	5.45	0.19	0.40	21.24	1622	39.09	337	86.0*	0.166	0.027	0.803	+1	0.63	-11.67	-12.17	32.83	-6.26
6340		B6IV	6.30	-0.02	0.13	20.88	285	36.50	370	11.7	0.026	0.011	0.479	+1	0.51	-12.49	-12.73	30.50	-6.00
6397		O7.5Vne	5.53	-0.01	0.31	21.11	924	39.08	157	15.5	0.048	0.023	-0.371	-1	0.05	-11.89	-12.20	32.12	-6.97
6462	γ Ara	B1Ib	3.34	-0.13	0.07	20.68	689	38.65	168	40.5	0.059	0.024	0.127	+1	0.49	-12.18	-12.47	31.57	-7.08
6500	δ Ara	B8Vn	3.62	-0.10	0.01	19.76	57	35.87	186	4.9	0.040	0.020	-0.132	1	0.50	-12.55	-12.66	29.04	-6.83
6508	υ Sco	B2IV	2.69	-0.22	0.02	19.26	134	37.55	306	18.2	0.053	0.017	0.017	-1	0.18	-12.47	-12.76	29.86	-7.69
6527	λ Sco	B2IV+B	1.63	-0.22	0.02	19.23	100	37.72	314	1.0	0.360	0.036	-0.865	0.027	0.15	-11.82	-12.67	30.26	-7.46
6535		O7V+O7V	5.70	0.04	0.36	21.32	800	38.98	304	1.0	0.291	0.034	0.939	+1	0.73	-11.51	-12.28	32.38	-6.61
6545	52 Oph	B8p	6.57	0.01	0.12	20.84	188	35.87	320	77.2*	0.026	0.012	0.315	+1	0.50	-12.49	-12.71	30.14	-5.74
6580	κ Sco	B1.5III	2.41	-0.22	0.03	20.36	202	38.05	260	18.6	0.062	0.019	-0.568	-1	0.10	-12.45	-12.65	30.24	-7.81
6672		O7.5II((f))	6.20	0.04	0.35	21.31	1619	39.26	312	25.6	0.072	0.018	0.616	+1	0.64	-11.90	-12.18	32.60	-6.66
6736	9 Sgr	O4V((f))	5.97	0.00	0.00	21.34	1585	39.17	299	7.4	0.134	0.026	0.859	+1	0.73	-11.77	-12.40	32.71	-6.46
6747		B0IIIn	6.14	0.00	0.29	21.23	1137	38.66	353	13.2	0.020	0.011	-0.021	+1	0.58	-12.23	-12.32	31.96	-6.71
6841		O7III:(n)((f))	6.54	0.11	0.43	21.40	1585	39.27	225	9.4	0.041	0.018	0.397	+1	0.69	-11.96	-12.09	32.52	-6.75
6879	ε Sgr	B9.5III	1.85	-0.03	0.02	20.06	26	35.81	148	14.4	0.106	0.030	-0.315	0.133	0.20	-12.07	-12.55	28.84	-6.97
6906		B9V	6.37	0.01	0.09	20.72	149	35.59	464	9.6	0.071	0.015	0.751	+1	0.54	-12.14	-12.69	30.29	-5.31
6916	ν Pav	B7-8III	4.64	-0.11	0.01	19.76	157	36.38	109	36.5	0.048	0.025	-0.214	1	0.50	-12.47	-12.57	29.99	-6.38
7033		B5V	6.47	-0.13	0.04	20.37	324	37.03	835	96.6*	0.015	0.006	0.271	+1	0.51	-12.85	-13.20	30.25	-6.78
7049	46 Dra	B9.5pHg:	5.04	-0.09	0.00	18.50	85	35.41	1251	6.9	0.051	0.008	-0.100	0.076	0.29	-12.44	-13.23	29.49	-5.92
7084	CX Dra	B2.5Ve	5.88	-0.09	0.13	20.65	299	37.10	1178	4.7	0.050	0.008	0.325	0.075	0.19	-12.22	-13.02	30.81	-6.29
7106	β Lyr	B8IIpe	3.45	0.00	0.10	20.76	375	37.67	801	30.2	0.073	0.011	0.799	+1	0.54	-12.13	-12.76	31.09	-6.58
7170		B8V-IV	6.40	-0.03	0.08	20.67	208	35.98	265	20.2	0.048	0.017	0.153	+1	0.49	-12.28	-12.61	30.43	-5.55
7236	λ Aql	B9Vn	3.44	-0.09	0.00	18.34	30	35.24	370	12.2	0.040	0.012	-0.293	0.146	0.25	-12.56	-13.04	28.47	-6.77
7307		B9.5V	5.63	-0.02	0.03	20.24	106	35.47	483	56.1	0.030	0.011	0.029	1	0.50	-12.68	-12.82	29.45	-6.02
7326		B8III+K:	6.58	0.03	0.14	20.91	291	36.28	577	8.6	0.123	0.016	0.771	0.047	0.22	-11.82	-12.58	31.19	-5.09
7348	α Sgr	B8V	3.97	-0.10	0.01	19.76	67	35.87	308	18.3	0.088	0.019	0.019	0.108	0.28	-12.16	-12.83	29.57	-6.31
7358	3 Vul	B6III	5.18	-0.12	0.03	20.24	238	36.65	532	15.5	0.029	0.009	0.123	+1	0.50	-12.58	-13.01	30.26	-6.39
7403		B3Ve	6.34	-0.14	0.06	20.54	354	36.89	594	5.6	0.042	0.010	0.827	+1	1.10	-12.35	-12.80	30.82	-6.07
7440	52 Sgr	B9	4.60	-0.07	0.01	19.76	75	35.59	312	7.3	0.486	0.042	-0.054	0.044	0.26	-11.42	-12.47	30.40	-5.19
7483	14 Cyg	B9III	5.40	-0.08	0.00	18.50	158	35.98	605	22.4	0.018	0.008	0.252	+1	0.98	-12.79	-13.12	29.68	-6.30
7528	δ Cyg	B9.5IV+F1V	2.87	-0.03	0.02	20.06	35	35.64	777	5.2	0.078	0.012	0.126	0.076	0.26	-12.17	-13.00	29.00	-6.63
7750	κ Cep	B9III	4.39	-0.05	0.02	18.11	100	36.03	1429	3.0	0.010	0.004	-0.242	1	0.50	-13.08	-13.45	29.00	-7.03
7767		O9V	5.84	0.10	0.41	21.15	959	39.03	736	8.7	0.028	0.009	0.556	+1	0.57	-12.38	-12.64	31.66	-7.37
7792	71 Dra	B9V	5.72	-0.05	0.03	20.24	121	35.59	1085	7.7	0.062	0.009	-0.210	0.072	0.19	-12.25	-13.03	29.99	-5.60
7852	ε Del	B6III	4.03	-0.13	0.02	19.52	150	36.69	490	10.2	0.015	0.008	0.111	1	0.50	-12.96	-13.09	29.47	-7.22
8023		O6V((f))	5.96	0.05	0.38	21.04	794	38.95	698	8.9	0.071	0.012	0.876	+1	0.58	-12.12	-12.71	31.76	-7.20
8064		B3Vn	6.48	-0.15	0.05	20.46	383	36.89	741	97.0*	0.020	0.007	-0.670	-1	0.09	-12.94	-13.15	30.30	-6.59
8106		B9III	5.73	-0.12	0.00	18.50	185	35.93	867	13.2	0.021	0.007	0.179	+1	1.05	-12.73	-13.16	29.88	-6.05
8119		B0II	5.64	0.11	0.40	21.37	1001	38.82	860	14.1	0.025	0.007	0.645	+1	0.69	-12.36	-12.66	31.72	-7.10
8154	68 Cyg	O7.5III:n((f))	5.00	-0.01	0.30	20.98	794	39.09	757	11.6	0.042	0.009	0.852	+1	0.56	-12.35	-12.84	31.53	-7.56
8238	β Cep	B1IV	3.23	-0.22	0.04	19.62	71	36.96	908	13.5	0.144	0.014	-0.205	0.048	0.24	-11.97	-12.94	29.81	-7.16
8281		O6.5V((f))	5.62	0.21	0.53	21.49	780	39.25	810	6.3	0.081	0.012	0.901	+1	0.86	-11.97	-12.58	31.89	-7.36
8406	14 Cep	O9Vn	5.56	0.06	0.37	21.33	583	38.65	612	5.3	0.032	0.009	0.364	+1	0.68	-12.14	-12.35	31.47	-7.19
8418	ι Aqr	B9IV-V	4.27	-0.07	0.00	18.50	71	35.69	297	5.7	0.055	0.018	-0.177	+1	0.50	-12.37	-12.78	29.42	-6.28
8428	19 Cep	O9.5Ib	5.11	0.08	0.34	21.23	1352	39.36	653	0.6	0.046	0.010	0.754	+1	0.63	-12.20	-12.62	32.14	-7.22
8469	λ Cep	O6I(n)fp	5.04	0.25	0.56	21.20	832	39.48	623	8.2	0.050	0.011	0.587	+1	0.59	-12.11	-12.42	31.81	-7.68
8539	π Aqr	B1Ve	4.66	-0.03	0.23	20.56	315	37.99	301	10.6	0.092	0.020	0.790	+1	0.58	-12.07	-12.69	31.01	-6.98
8540	δ Tuc	B9.5V	4.48	-0.03	0.02	20.06	63	35.51	418	126.9*	0.026	0.011	-0.276	1	0.50	-12.74	-12.86	28.93	-6.57
8546		B9.5Vn	5.27	-0.03	0.02	20.06	91	35.47	655	9.5	0.033	0.009	-0.176	0.146	0.22	-12.56	-13.07	29.43	-6.03
8622	10 Lac	O9V	4.88	-0.20	0.11	20.70	589	38.59	598	1.5	0.077	0.013	0.233	0.089	0.18	-12.03	-12.78	31.59	-7.00
8858	ψ^2 Aqr	B5V	4.39	-0.15	0.02	20.06	127	36.54	321	11.5	0.021	0.010	-0.254	+1	0.49	-12.75	-13.04	29.54	-7.00
8926		B3IV	4.91	-0.12	0.08	20.67	257	37.14	554	58.1	0.038	0.011	0.632	+1	0.52	-12.40	-12.81	30.49	-6.65
8937	β Scl	B9.5IVpHgMnEu	4.37	-0.09	0.00	18.50	73	35.58	72	59.0	0.079	0.039	-0.338	-1	0.14	-12.22	-12.49	29.58	-6.01
8988	ω^2 Aqr	B9.5V	4.49	-0.04	0.01	19.76	65	35.47	326	10.8	0.563	0.044	-0.074	0.039	0.25	-11.36	-12.45	30.34	-5.13
8998	106 Aqr	B9Vn	5.24	-0.08	0.00	18.50	102	35.59	306	12.1	0.057	0.016	0.053	0.142	0.81	-12.32	-12.71	29.78	-5.82

Table 3. Upper limits for OB stars not detected in the RASS (see Sect. 3)

HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log
7	B9III	5.59	29.59	-6.41	682	B9pSi	5.59	29.21	-6.39	1178	B8III	3.63	29.03	-7.25	1646	B5IV	6.05	30.15	-6.55
15	B8IVpMnHg	2.06	28.23	-7.85	696	B2Ia	6.25	31.55	-7.30	1180	B8Vpe	5.09	29.20	-6.67	1659	B2V	5.50	29.82	-7.55
28	B7IV	6.74	30.05	-6.26	702	B7IV	5.47	29.80	-6.51	1183	B8V	6.17	29.57	-6.30	1660	B2Ve	5.89	29.76	-7.60
39	B2IV	2.83	29.53	-8.06	708	B9.5Vn	4.89	28.95	-6.52	1185	B8III	6.07	29.85	-6.43	1669	B2II:+K4II:	6.02	30.04	-7.98
51	B9V	5.75	29.36	-6.23	718	B9III	4.28	29.19	-6.81	1186	B8V	6.21	30.29	-5.58	1671	B8V	5.78	29.48	-6.39
55	B8Vnn	6.35	29.41	-6.46	721	B5IV	4.25	29.43	-7.27	1191	B1V	5.77	30.36	-7.48	1679	B2IVne	4.27	30.04	-7.54
61	B8III	6.47	30.24	-6.05	746	B9pHgMn	6.36	29.67	-5.92	1194	B9pSi	6.30	29.47	-6.12	1690	B9Vn	6.67	29.69	-5.90
62	B7III	5.89	29.94	-6.52	749	B9.5V	4.90	28.96	-6.50	1199	B5V	5.67	29.51	-7.02	1704	B5V	6.37	30.12	-6.42
65	O9IIInn	6.14	31.45	-7.59	760	B5V	6.54	30.17	-6.37	1202	B8V	5.48	29.42	-6.45	1705	B9V	4.36	28.79	-6.81
70	B8V	6.11	29.53	-6.35	762	B9V	6.77	29.87	-5.72	1204	B9.5V	5.03	28.89	-6.57	1719	B5V	6.13	29.74	-6.80
78	B7V	5.90	29.58	-6.54	769	B9.5V	6.30	29.54	-5.93	1207	B6V	5.37	29.39	-6.93	1723	B9V	5.07	29.16	-6.44
89	B9IVMn	6.55	29.78	-6.02	779	B2IV	4.07	30.12	-7.47	1213	B6V	4.65	29.38	-6.93	1728	B9.5V	6.14	29.29	-6.17
91	B5IV	5.57	29.83	-6.88	785	B7IIIpHg	5.77	29.81	-6.65	1214	B6V	5.11	30.16	-6.16	1731	B3IV	6.56	30.65	-6.49
93	B9III	5.40	29.49	-6.51	798	B8V	6.55	29.79	-6.09	1215	B1.5V	5.49	30.16	-7.44	1748	B1.5Vn	6.34	30.56	-7.04
96	B9IV	5.74	29.35	-6.44	801	B3V	4.66	29.55	-7.34	1221	B9.5IV	6.06	29.40	-6.24	1749	B3V	5.23	29.59	-7.30
113	B9IIIn	5.94	29.61	-6.38	806	B9V	4.11	28.66	-6.93	1239	B3V+A4IV	3.47	29.00	-7.89	1750	B9IV	6.33	29.43	-6.36
121	B6V	6.18	29.79	-6.53	811	B7V	4.25	29.16	-6.96	1240	B6V+B9.5V	4.66	29.32	-7.00	1753	B3V	6.36	30.26	-6.63
123	B8Vn	4.73	28.98	-6.89	814	B9V	6.36	29.54	-6.06	1243	B5V	5.67	29.59	-6.95	1754	B8.5III-IV	6.54	30.02	-6.02
126	B9V	4.37	29.03	-6.56	836	B6V	5.22	29.46	-6.86	1253	B3V	5.33	29.74	-7.15	1757	B7IVnn	5.30	29.66	-6.65
130	B1Ia	4.16	31.21	-7.77	838	B8Vn	3.63	28.83	-7.04	1258	B2.5V	6.46	30.44	-6.66	1759	B8III	6.39	30.05	-6.23
137	B9III	6.48	29.97	-6.03	846	B8III	6.36	29.69	-6.59	1260	B0III	6.99	30.86	-7.76	1761	B5Vp	6.57	30.10	-6.43
144	B7III	5.08	29.64	-6.82	847	B7V	5.49	29.53	-6.60	1268	B9pSi	5.20	29.16	-6.43	1763	B1V	5.80	30.51	-7.33
149	B8IIIpHgMn:	6.50	30.13	-6.15	890	B7V	5.28	29.16	-6.96	1271	B9.5IV	6.41	29.56	-6.08	1764	B3V	5.68	29.95	-6.94
153	B2IV	3.66	29.66	-7.92	891	B9V	6.74	29.42	-6.18	1273	B3Ve	4.04	29.09	-7.80	1765	B2IV-V	4.73	30.04	-7.44
154	B5V	4.36	29.25	-7.29	896	B6III	4.70	29.68	-6.96	1284	B9.5V	5.95	29.24	-6.23	1768	B9V s	6.46	29.39	-6.20
155	B2.5IV	5.89	30.39	-6.96	910	B7V	5.61	29.56	-6.56	1288	B4V	5.37	29.88	-6.81	1769	B8V	6.56	29.82	-6.06
179	B2V	4.80	29.75	-7.62	922	B9V	5.89	29.22	-6.37	1289	B5V	5.57	29.67	-6.86	1770	B1V	5.00	30.24	-7.60
181	B9.5III	6.17	29.71	-6.10	927	B7V	6.80	29.87	-6.25	1297	B9IIIp:Si:	6.12	29.43	-6.56	1772	B5IVnpe	6.09	30.26	-6.45
189	B5V	5.67	29.72	-6.82	928	B7V	7.00	29.93	-6.19	1305	B5Vn	5.70	29.77	-6.76	1776	B9III	5.94	29.36	-6.64
193	B5IIIe	4.54	29.62	-7.25	930	B5V	6.31	29.73	-6.81	1307	B8Vn	6.23	29.54	-6.34	1778	B8III	5.90	29.89	-6.39
205	B9.5IIIpHgMnCr	6.05	29.53	-6.28	938	B1.5V	6.11	30.52	-7.08	1312	B5IV	6.44	30.39	-6.32	1781	B1.5V	5.70	30.53	-7.08
208	B8III	5.41	29.47	-6.82	939	B3V+A0IV	5.53	29.93	-6.97	1315	B9Vn	5.22	29.13	-6.47	1783	B2IV	5.25	30.38	-7.20
220	B9V	5.57	29.30	-6.29	944	B8III	5.72	29.46	-6.81	1320	B3IV	4.29	29.64	-7.51	1786	B4IVn	6.32	30.43	-6.47
223	B9III	4.89	29.24	-6.76	948	B8V	5.98	29.71	-6.16	1333	B1.5IV	5.55	30.30	-7.50	1789	B1Vpe	4.95	30.37	-7.46
226	B5V+F8V	4.53	29.32	-7.22	950	B4V	6.15	29.85	-6.84	1350	B4IV	4.85	29.59	-7.31	1798	B2Vn	6.25	30.19	-7.18
233	B9.5V+G0III-IV	5.39	28.39	-7.05	954	B9pSi	5.79	29.24	-6.35	1363	B5III	5.85	30.43	-6.44	1800	B9pHgSi	6.57	29.63	-5.96
241	B9.5V	6.21	29.31	-6.15	970	B8V	6.27	29.68	-6.19	1369	B9V	5.37	29.02	-6.58	1801	B8.5V	6.11	29.50	-6.23
266	B9IVn	5.55	29.56	-6.23	979	B9VpSi	6.45	29.47	-6.13	1375	B8IV-V	5.99	29.33	-6.64	1804	B9Ib	5.74	31.05	-6.71
280	B7IIIp	4.31	29.48	-6.98	982	B8V	5.47	29.18	-6.69	1377	B8V	5.73	29.39	-6.49	1806	B9.5Vn	6.23	29.44	-6.03
283	B9.5Vn	6.04	29.26	-6.21	983	B9V	6.17	29.55	-6.04	1378	B3V	6.36	29.68	-7.20	1808	B5V	5.42	29.52	-7.02
302	B3V	6.54	30.20	-6.69	985	B2.5Ven	4.84	29.57	-7.54	1397	B6IV	6.06	29.82	-6.68	1810	B2.5IV	4.88	29.94	-7.41
326	B8V	5.79	29.39	-6.49	987	B3V	5.15	29.45	-7.44	1402	B8IV	5.88	29.45	-6.63	1811	B2IV	4.59	30.08	-7.51
335	B7Ve	4.25	28.92	-7.20	989	B5V	5.03	29.29	-7.25	1415	B3V	5.55	29.85	-7.04	1814	B9.5Vn	5.50	28.93	-6.53
338	B6V+B9V	3.92	29.04	-7.28	1005	B5IV	5.28	29.68	-7.03	1417	B0III	5.77	30.78	-7.87	1820	B2V	6.41	30.50	-6.87
342	B9.5V	5.55	29.17	-6.30	1011	B5V	5.29	29.40	-7.14	1419	B9.5Vn	6.21	29.37	-6.10	1833	B2V	5.78	30.25	-7.12
345	B9IV	5.57	29.32	-6.47	1029	B7V	6.09	29.60	-6.52	1420	B5V	6.79	29.87	-6.67	1840	B2IV-V	6.33	30.61	-6.87
348	B7III-IV	5.81	29.82	-6.56	1033	B9V+A1	6.49	29.37	-6.22	1423	B1Vne	5.60	30.85	-6.99	1842	B1IV+B1.5V	5.46	30.62	-7.40
364	B8III	5.98	29.90	-6.38	1034	B5V	4.98	29.40	-7.14	1424	B8V	6.26	29.41	-6.46	1843	B5Iab	4.76	30.75	-7.56
369	B9IIIpSi	6.61	29.96	-6.03	1035	B9Ia	4.21	30.93	-7.57	1441	B9III	5.81	29.74	-6.26	1846	B9IIIp:Hg:	6.55	29.78	-6.22
438	B7IIIpHgMn	6.39	30.27	-6.20	1037	B6Vn	5.58	29.45	-6.86	1443	B2IV-V	5.07	30.10	-7.38	1848	B2V	6.22	30.40	-6.98
439	B9V+K0Ib	5.70	27.07	-8.18	1047	B7V	6.24	29.34	-6.78	1445	B9pHg	5.88	29.30	-6.30	1851	B2V	6.85	30.66	-6.72
446	B9IV	5.88	29.55	-6.25	1051	B8V	5.82	29.33	-6.54	1449	B9pSi	5.72	29.42	-6.17	1858	B2IV-Ve	5.69	29.99	-7.49
449	B9Ve	6.58	29.33	-6.26	1059	B9III	6.39	29.61	-6.38	1462	B7III	6.33	30.24	-6.23	1860	B6V	6.18	29.73	-6.58
455	B9.5III	6.22	29.64	-6.17	1063	B8IIIpMn	5.47	29.67	-6.61	1463	B2III	3.93	30.25	-7.60	1863	B4Vn	6.46	30.07	-6.62
465	B9pCrEu	6.36	29.66	-5.93	1072	B2IV	6.41	30.43	-7.16	1469	B7V	5.31	29.44	-6.68	1864	B3V	5.64	29.79	-7.10
472	B3Vpe	0.46	28.08	-8.81	1074	B1V	5.90	30.40	-7.44	1476	B9IV-V	6.30	29.74	-5.95	1868	B1V	5.34	30.36	-7.48
474	B9Vn	6.70	29.83	-5.76	1079	B9IV	5.77	29.44	-6.35	1493	B9III	5.87	29.49	-6.51	1871	B2V	6.59	30.48	-6.89
477	B8III	4.94	29.63	-6.65	1087	B5Ve	4.23	29.07	-7.47	1497	B3V	4.28	29.29	-7.60	1873	B2.5V	6.22	30.24	-6.87
480	B9V	5.18	28.82	-6.77	1088	B8V+B8V	4.27	29.10	-6.77	1500	B8IVne	6.08	29.56	-6.52	1880	B0.5V	5.61	30.33	-7.76
482	B8III	6.37	30.06	-6.22	1092	B8V	5.83	29.34	-6.53	1508	B2Ve	5.90	30.25	-7.13	1883	B9IIIpHg:Mn:	5.60	29.27	-6.72
488	B7II	6.34	30.79	-6.43	1094	B9p	6.30	29.36	-6.24	1512	B5III	6.35	30.13	-6.74	1886	B1V	5.67	30.71	-7.13
490	B9IV-V	5.64	29.42	-6.28	1097	B8Vn	6.42	29.59	-6.29	1520	B5IV	4.02	29.47	-7.24	1890	B1.5V	6.56	30.70	-6.90
491	B8IIIn	5.78	29.79	-6.49	1100	B9.5p	5.23	29.04	-6.43	1541	B8II-IIISi:	5.54	29.99	-6.66	1891	B2.5V	6.24	30.30	-6.80
496	B2Vep	4.07	29.47	-7.91	1113	B7Vne	5.57	29.41	-6.72	1552	B2III+B2IV	3.69	30.05	-7.79	1893	B0.5V	6.73	31.00	-7.08
533	B1.5V	5.52	30.53	-7.08	1121	B9IIIpSi4200	5.53	29.67	-6.33	1553	B5V	6.11	29.66	-6.88	1894	B0V	7.96	31.32	-7.00
536	B9IIIpHgMn	5.79	29.70	-6.30	1122	B5IIIe	3.01	29.11	-7.77	1555	B9.5V	5.52	28.95	-6.52	1896	B0.5Vp	6.70	30.91	-7.18
542	B3III	3.38	29.40	-7.91	1123	B0.5V	4.97	30.10	-7.99	1567	B3III+B0V	3.72	29.80	-7.52	1897	O9.5Vp	5.08	30.71	-7.83
548	B8III	4.99	29.32	-6.97	1126	B9Vne	5.69	29.06	-6.53	1573	B2Ib	6.07	30.94	-7.42	1900	B3IV	6.40	30.45	-6.70
561	B5III	6.02	30.04	-6.83	1131	B1III	3.83	29.95	-8.25	1574	B5V	5.99	29.93	-6.61	1902	B9IV-V	5.83	29.39	-6.31
562	B8III	6.78	30.47	-5.81	1140	B7IV	5.46	29.64	-6.67	1576	B9V	5.81	29.36	-6.24	1906	B3V	6.54	30.35	-6.54
589	B8Ib	5.58	30.64	-7.15	1141	B6V	5.66	29.62	-6.70	1582	B6V	5.51	29.73	-6.59	1910	B4IIIpe	3.00	29.31	-7.75
590	B8III	5.04	29.50	-6.78	1142	B6III	3.70	29.28	-7.37	1595	B1V	6.15	30.78	-7.05	1911	B1V	5.72	30.60	-7.24
604	B8V+A0V	4.84	29.05	-6.82	1144	B8V	5.64	29.39	-6.48	1600	B7V	6.09	29.54	-6.58	1914	B9.5V+F9III	5.40	28.30	-7.14
615	B9IV-Vn	6.15	29.63	-6.06	1145	B6IV	4.30	29.35	-7.15	1605	F0Iae+B	2.99	30.91	-7.75	1918	B1V	6.05	30.69	-7.15
627	B5Ia	6.36	31.71	-6.92	1146	B7V	5.25	29.42	-6.71	1609	B9Vn	7.03	29.87	-5.73	1920	B8III	5.88	29.77	-6.52
628	B9V	5.63	29.38	-6.22	1149	B8III	3.87	29.12	-7.16	1610	B9Vn	6.66	29.70	-5.89	1923	B2IV-V	6.19	30.32	-7.16
640	B9V+G0II-III	6.07	28.23	-7.27	1151	B8V	5.76	29.42	-6.46	1612	B8V+K4II	3.75	26.66	-8.97	1924	B2IV-V	5.96	29.94	-7.53
652	B9V	5.28	29.05	-6.54	1153	B3V	5.35	29.76	-7.13	1617	B3V	4.81	29.70	-7.19	1928	B3IV	5.18	29.95	-7.19
654	B1Iab	6.48	31.47	-7.30	1160	B8Vne	6.14	29.28	-6.60	1619	B8V	6.24	29.64	-6.24	1932	B2Vp	6.65	30.64	-6.73
668	B9.5V	6.60	29.35	-6.11	1163	B2.5V	6.57	30.07	-7.03	1621	B9.5Vn	4.91	28.96	-6.51	1933	B1.5IV	5.96	30.76	-7.04
677	B8V	6.63	29.97	-5.90	1165	B7IIIe	2.87	28.86	-7.60	1640	B2.5IV	6.41	30.67	-6.67	1934	B3IIIe	4.57	29.89	-7.43
679	B5V	6.11	29.91	-6.63	1166	B9IVp	6.32	29.59	-6.20	1641	B3V	3.17	28.96	-7.93	1938	B9.5III-IVp:	6.04	29.30	-6.43
681	Bep+M7IIIe	3.04	27.38	-10.60	1172	B8V	5.45	29.32	-6.56	1643	B9pSi	5.43	29.12	-6.47	1942	B7V	6.50	29.79	-6.33

Table 3. continued

HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log
1944	B7V	6.38	29.78	-6.34	2325	B2.5V	6.15	30.19	-6.91	2669	B9V	6.48	29.66	-5.93	2972	B4IV-V:	6.76	30.52	-6.28
1945	B8IV	6.43	29.84	-6.24	2343	B6IIIe	4.15	29.45	-7.19	2670	B0.5V+F5III	6.49	30.78	-7.31	2979	B9IV	7.16	29.90	-5.90
1946	B3IV	4.86	29.79	-7.36	2344	B2V	5.06	29.95	-7.42	2674	B9IV	5.50	29.20	-6.59	2980	B9IV	7.26	29.94	-5.86
1947	B8V	5.82	29.48	-6.39	2347	B9V	6.48	29.54	-6.05	2676	B9.5III	6.11	29.70	-6.11	2981	B5V	5.42	29.91	-6.63
1949	B0III	4.21	30.37	-7.99	2348	B9V	5.76	29.19	-6.40	2679	O7.5V	6.48	31.40	-7.58	2984	B7IV-V	6.41	29.85	-6.37
1950	B1.5V	6.22	30.55	-7.06	2356	B3Ve	4.60	29.37	-7.52	2688	B2IV-V	6.62	30.73	-6.75	2986	B7V	6.54	30.08	-6.04
1951	B8p	6.59	29.56	-6.31	2357	B3ne	5.40	29.65	-7.24	2689	B9.5V	5.45	28.96	-6.50	2994	B5V	5.60	29.91	-6.63
1952	B2IV-V	4.95	30.03	-7.45	2358	B3e	5.60	29.70	-7.16	2690	B2IVe	5.71	30.44	-7.15	3001	B9VpSi	6.40	29.74	-5.86
1956	B7IVe	2.64	28.51	-7.80	2360	B6V	6.27	29.62	-6.70	2691	B3V	5.79	29.95	-6.94	3004	B1.5III	5.62	31.00	-7.03
1957	B9.5IIIpSi4200	6.52	29.73	-6.08	2361	B4V	4.48	29.39	-7.30	2695	B2V	6.65	30.66	-6.71	3006	B2.5V	6.43	30.01	-7.09
1960	B9.5V	6.31	29.05	-6.42	2364	B4Vnpe	5.74	29.88	-6.81	2699	B1II	6.03	31.21	-7.28	3011	B7V	5.88	29.83	-6.29
1961	B2.5Ve	6.21	29.98	-7.13	2373	B1.5V	6.16	30.46	-7.14	2702	B2IV-V	4.83	29.98	-7.50	3016	B3IV	6.54	30.73	-6.41
1962	B3IVp	6.21	30.37	-6.77	2374	B6III	6.65	30.45	-6.19	2704	B2.5IV	5.69	30.32	-7.02	3020	B6IV	6.03	29.98	-6.53
1973	B9.5V	5.29	29.00	-6.46	2380	B2.5V	5.93	30.13	-6.97	2718	B2V	5.92	30.27	-7.11	3022	B7V	5.88	29.79	-6.33
1985	B8IIIpHgMn:	6.00	29.80	-6.48	2395	B5Vn	5.10	29.51	-7.03	2726	B3V	5.96	30.03	-6.86	3023	B2IV-V	5.90	30.51	-6.97
1991	B8III	6.05	29.64	-6.64	2397	B2IVe	5.69	30.46	-7.13	2733	B2IV+G5IV	6.36	30.83	-6.76	3025	B2V	6.57	30.64	-6.73
1993	B2IV-V	5.29	30.12	-7.36	2409	B8Ib	5.80	31.38	-6.44	2734	B0.5V	6.12	30.91	-7.18	3032	B8III	6.31	30.16	-6.12
1997	B9Vn	6.07	29.32	-6.27	2410	B3V	6.15	29.91	-6.98	2739	B0III	6.03	31.37	-7.29	3034	B0V:pe:	4.50	30.42	-7.92
2005	B5V	6.22	29.99	-6.55	2412	B9Ve	5.70	29.02	-6.57	2741	B2IV	6.60	30.90	-6.69	3035	B2.5III	5.08	30.46	-7.10
2010	B9IV	4.91	29.07	-6.72	2413	B9III	6.55	29.92	-6.08	2743	B2IV-V	6.33	30.69	-6.79	3037	B1.5IV	5.23	30.37	-7.42
2031	B2IV-V	5.35	30.16	-7.32	2415	B8V	5.62	29.35	-6.52	2745	B3IIIe	4.66	30.11	-7.21	3042	B8III	6.23	30.13	-6.16
2033	B9pSiCrEu	5.59	29.18	-6.42	2418	B8V	5.52	29.27	-6.61	2749	B2IV-Ve	3.85	29.62	-7.86	3049	B9V	5.93	29.48	-6.11
2038	B9V	6.71	29.63	-5.97	2420	B8III	5.20	29.57	-6.71	2759	B4III-IV	5.94	30.31	-6.67	3058	B1.5IV	5.84	30.63	-7.17
2052	B2V	5.92	30.30	-7.07	2425	B9npEu	5.79	29.21	-6.38	2760	B8III	6.65	30.31	-5.97	3059	B8II	5.14	30.34	-6.67
2058	B1.5V	6.57	30.66	-6.95	2432	B1Ib	6.15	31.43	-7.10	2762	B8-9V	4.76	29.15	-6.72	3074	B2IV-V	6.32	30.68	-6.80
2064	B6V	5.11	28.83	-7.48	2433	B5V	6.35	30.00	-6.54	2769	B4V	5.80	29.75	-6.94	3078	B2IV	6.04	30.72	-6.87
2084	B0.5II	4.82	30.96	-7.70	2438	B7III	6.03	30.01	-6.45	2770	B2IV-V	5.03	30.02	-7.46	3081	B9V	5.79	29.08	-6.52
2089	B3V	6.10	29.88	-7.01	2441	B8IIIn	6.57	30.15	-6.13	2774	B2IV-V	6.46	30.68	-6.80	3084	B2.5V	4.49	29.61	-7.50
2101	B9.5pSiFe	5.73	29.22	-6.25	2442	O9.5II	6.21	31.24	-7.80	2783	B9V	6.53	29.72	-5.87	3088	B1.5IV	5.70	30.40	-7.40
2106	B2.5IV	4.36	29.84	-7.51	2446	B7IV	5.71	29.79	-6.52	2784	B8V	5.45	29.24	-6.63	3091	B2V	5.49	30.29	-7.09
2109	B8IIIn	6.63	30.12	-6.16	2451	B8III	3.17	28.72	-7.56	2787	B2V+B3IVne	4.66	29.62	-7.76	3100	B8III	6.38	29.79	-6.49
2111	B9Iab	6.05	31.60	-6.55	2454	B8IIISi	6.51	30.22	-6.06	2789	B8II-III	5.85	30.39	-6.26	3101	B6V	6.02	29.87	-6.45
2112	B9.5IV	6.05	29.52	-6.12	2461	B8III	5.79	29.85	-6.44	2790	B2IVne	5.11	30.14	-7.44	3107	B2V	6.78	30.74	-6.64
2116	B8V	6.37	29.57	-6.30	2475	B4V	6.12	29.89	-6.80	2799	B2.5V	6.61	30.46	-6.65	3114	B2.5V	5.35	29.98	-7.13
2125	B9V	5.47	29.01	-6.59	2479	B0III	5.90	31.12	-7.55	2800	B2.5V	6.01	30.27	-6.83	3116	B2.5IV	5.09	30.20	-7.15
2128	B5III	4.95	29.84	-7.04	2490	B4IV	5.14	29.96	-6.94	2801	B8III	5.99	29.90	-6.38	3118	B5V	6.22	29.91	-6.63
2130	B8III	5.14	29.61	-6.67	2492	B2IIIe	5.20	30.48	-7.37	2809	B9III	6.47	29.89	-6.11	3134	B9.5Vn	5.99	29.32	-6.15
2135	B2Ia	4.63	31.07	-7.78	2494	B2.5V	5.93	30.20	-6.91	2812	B7IV	4.96	29.41	-6.90	3135	B2.5Ve	6.51	30.52	-6.59
2139	B9pSi	6.23	29.49	-6.11	2497	B8IV	6.54	29.90	-6.18	2815	B9II-III	5.39	29.94	-6.52	3137	B4V	5.99	29.99	-6.70
2142	B2Ven	5.21	29.84	-7.53	2501	B2III	5.80	30.81	-7.03	2817	B2Ve	6.41	30.57	-6.81	3139	B8V	6.14	29.62	-6.25
2149	B2.5V	5.65	30.05	-7.05	2502	B9.5V	5.66	29.19	-6.27	2819	B5IIIn	5.43	30.01	-6.87	3142	B2IV-V	6.32	30.32	-7.16
2154	B5IV	5.38	29.81	-6.89	2504	B9III	5.29	29.41	-6.58	2823	B3III-IV	5.39	30.16	-7.07	3143	B2IV-V	6.34	30.36	-7.12
2159	B3V	4.42	29.42	-7.47	2507	B6Vnne	6.62	29.97	-6.35	2824	B2IV-V	6.60	30.65	-6.83	3147	B2IVpne	5.81	30.46	-7.13
2161	B3V	6.66	30.23	-6.66	2510	B4Vne	6.21	29.94	-6.75	2825	B2.5IVe	5.33	30.11	-7.24	3152	B5III	6.33	30.31	-6.56
2167	B9V	6.55	29.61	-5.99	2511	B7III	5.12	29.76	-6.70	2826	B8	6.19	29.65	-6.22	3156	B5Vn	5.87	29.69	-6.85
2173	B2.5Ib	5.75	31.01	-7.24	2517	B3II-III	6.15	30.96	-6.61	2827	B5Ia	2.45	30.79	-7.86	3157	B2IV-V	6.10	30.17	-7.31
2177	B9IV	5.02	29.10	-6.69	2518	B9IV	5.26	29.19	-6.60	2829	B7III	6.31	30.22	-6.25	3158	B9V	6.15	29.46	-6.14
2182	B9Vn	6.35	29.41	-6.18	2519	B7III	5.85	30.12	-6.35	2840	B6IV	6.41	30.27	-6.24	3159	B3V	4.82	29.62	-7.27
2193	B9.5V	5.75	29.19	-6.28	2521	B8IIIn	5.74	29.83	-6.45	2841	B7III	5.78	29.96	-6.50	3161	B4V	6.28	29.89	-6.80
2198	B5Vn	4.95	29.55	-6.99	2537	B2IV	7.04	30.98	-6.61	2845	B8Ve	2.90	28.43	-7.45	3162	B9pSi	5.52	29.19	-6.41
2199	B3IV	4.48	29.78	-7.36	2538	B1.5IVne	3.96	29.94	-7.86	2847	B2V	6.31	30.41	-6.96	3168	B3III	6.13	30.78	-6.53
2202	B9pHgMn	6.18	29.42	-6.18	2544	B2V	6.33	30.42	-6.95	2855	B0IV:pe	5.61	31.03	-7.54	3174	B9V	6.23	29.69	-5.90
2205	B2V	5.05	29.97	-7.40	2545	B6Vnpe	5.70	29.26	-7.05	2856	B2IV-V	5.90	30.44	-7.04	3179	B3Vnp	6.19	30.13	-6.76
2207	B8Vnn	6.58	29.74	-6.14	2547	B9.5pSi	6.48	29.47	-6.00	2858	B9IV	6.22	29.66	-6.13	3186	B2.5Vn	6.30	30.25	-6.86
2213	B3III	6.52	30.79	-6.53	2568	B8IIIe	5.87	29.77	-6.51	2859	B2+B8V+G8Ib-II	5.79	29.22	-8.09	3194	B2.5V	5.68	30.13	-6.98
2221	B8V	5.06	28.73	-7.15	2571	B1IV	4.83	30.38	-7.64	2860	B5V:	5.95	29.85	-6.69	3195	B4V	6.37	29.97	-6.72
2222	B1V	5.91	30.68	-7.15	2577	B3IVe+K2II	6.21	29.48	-7.60	2863	B9VpSi:	5.54	29.10	-6.49	3201	B6III	6.07	30.40	-6.24
2223	B7V	5.30	29.48	-6.64	2589	B8Vn	5.92	29.63	-6.24	2870	B3V	6.38	30.32	-6.57	3203	B8Ib-II	5.70	30.99	-6.42
2224	B5V	5.83	29.84	-6.70	2595	B3II-III	5.30	30.61	-6.97	2871	B4V	7.13	30.51	-6.18	3204	B2IV-V	5.21	30.41	-7.07
2226	B7V	6.54	29.90	-6.22	2596	B3II	4.37	30.35	-7.50	2873	B2V	5.77	30.36	-7.01	3205	B7V	6.26	29.72	-6.41
2229	B9II-III	5.33	29.86	-6.60	2598	B3V	6.36	29.99	-6.90	2885	B4V	6.68	30.30	-6.40	3206	B1IV	4.27	30.29	-7.73
2237	B9III	6.10	29.74	-6.26	2602	B7IV	5.40	29.56	-6.75	2895	B9V	6.30	29.61	-5.98	3213	B1IVe	5.23	30.59	-7.43
2240	B3Ib	6.25	30.92	-7.22	2603	B1-2III:	6.61	30.84	-7.00	2897	B1V	6.21	30.60	-7.24	3215	B9pSiCr	5.64	29.23	-6.36
2244	B9Vn	5.01	28.97	-6.63	2605	B8III	6.40	30.15	-6.13	2902	B2V+M2Iabpe	4.97	27.55	-9.49	3217	B6Ve	6.28	29.83	-6.48
2246	B6V	6.63	29.91	-6.40	2611	B2.5V	6.23	30.20	-6.91	2907	B8IVpSi	6.26	30.03	-6.05	3219	O9.5II	6.44	31.62	-7.43
2248	B7III	6.57	30.27	-6.19	2613	B7III	6.35	30.27	-6.19	2911	B3Vne	5.54	29.95	-6.94	3223	B6IV	4.35	29.32	-7.18
2249	B2.5Vn	5.92	30.13	-6.98	2614	B2.5III	6.37	30.92	-6.64	2921	B2Ve	5.70	30.19	-7.19	3227	B3V	5.82	29.93	-6.96
2258	B9IIIpSiCr:	6.32	29.92	-6.07	2616	B3V	5.59	29.85	-7.04	2922	B8V	4.64	29.17	-6.71	3234	B5V	6.03	30.03	-6.50
2266	B2V	5.52	30.16	-7.22	2619	B3V	5.06	29.68	-7.21	2928	B2III	5.74	30.70	-7.14	3237	B1.5IIIe	4.78	30.49	-7.54
2270	B9V	6.22	29.43	-6.16	2621	B3V	6.42	30.20	-6.69	2932	B9IIIe	6.53	29.78	-6.22	3239	B1.5V	6.06	30.48	-7.13
2271	B4IV	5.81	30.16	-6.74	2623	B2.5IV-V:	6.26	30.37	-6.87	2937	B8IV	4.53	29.36	-6.71	3240	B1.5IV	5.08	30.44	-7.36
2273	B2.5V	5.27	29.92	-7.19	2624	B9III	5.96	29.62	-6.38	2940	B9.5V	5.72	29.17	-6.30	3241	B2IV-V	6.11	30.58	-6.90
2276	B5III	6.54	30.55	-6.33	2625	B4III	6.31	30.55	-6.51	2944	B8IV	4.70	29.36	-6.72	3244	B2.5IV	5.13	30.14	-7.21
2279	B9V	5.78	29.33	-6.27	2627	B1Ib	6.49	31.38	-7.15	2947	B6Vn	6.72	29.89	-6.43	3250	B2IV-V	5.83	30.62	-6.85
2282	B2.5V	3.02	29.04	-8.07	2628	B2IV-Vne	6.53	30.69	-6.79	2948	B6V	4.50	29.40	-6.92	3268	B9.5V	5.98	29.30	-6.17
2288	B1.5Ve	5.53	30.35	-7.26	2633	B2IV-V	6.59	30.62	-6.86	2949	B5IVn	4.62	29.77	-6.93	3273	B9pHgMn	6.43	29.55	-6.04
2292	B3V	6.40	30.18	-6.71	2640	B2V	5.63	30.19	-7.19	2954	B2IV-V	5.80	30.66	-6.82	3293	B1.5III	5.97	30.86	-7.17
2297	B8IIIn	6.71	30.17	-6.11	2645	B9IIIn	6.38	29.82	-6.18	2956	B7V	6.50	30.03	-6.09	3294	B1V	4.82	30.32	-7.51
2300	B8Vn	6.26	29.68	-6.19	2648	B1V	4.99	30.20	-7.64	2961	B2.5V	4.84	29.93	-7.18	3301	B9III-IV	5.37	29.33	-6.57
2306	B8IIIHe wk	6.60	30.15	-6.13	2653	B3Iab	3.02	30.74	-7.76	2963	B5Vn	5.73	29.98	-6.56	3307	B2V+K3III	1.86	26.54	-10.55
2309	B5Ve	6.12	29.84	-6.70	2656	B9IIIn	6.45	29.81	-6.19	2964	B2.5V	5.76	30.14	-6.96	3322	B3V	5.98	30.72	-6.17
2312	B9V	6.66	29.57	-6.03	2657	B8II	4.12	29.93	-7.07	2968	B6IVe	6.00	30.07	-6.43	3326	B3V	5.47	30.07	-6.82
2323	B9V	6.31	29.41	-6.19	2659	B8Vn	6.02	29.61	-6.27	2971	B9IV-Vp:Si:	6.06	29.38	-6.32	3330	B2Ve	5.17	29.88	-7.50

Table 3. continued

HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log
3331	B9.5V	6.73	29.60	-5.86	3898	B7III	5.08	29.77	-6.70	4603	B2IV	4.72	30.07	-7.51	5296	B9IV	6.00	29.71	-6.08
3343	B3V	5.75	29.94	-6.95	3920	B1IV	6.48	31.09	-6.93	4611	B6Iab-Ib	6.33	31.95	-6.18	5308	B9.5+K5III	5.56	26.96	-8.20
3345	B8III	6.67	30.17	-6.12	3924	B2III	5.93	30.98	-6.87	4612	B8V	6.23	29.86	-6.01	5311	B5Ve	6.11	29.75	-6.79
3353	B4V	6.70	30.22	-6.47	3925	B3V	5.71	29.97	-6.92	4618	B6IIIe	4.47	29.65	-7.00	5316	B4Vne	5.07	29.54	-7.15
3356	B2Vn	5.79	30.85	-6.53	3935	B2IV-V	6.37	30.73	-6.75	4619	B9V	6.37	29.58	-6.01	5320	B1.5III	5.75	30.76	-7.27
3358	B2IV	5.33	30.56	-7.03	3937	B9IV	5.26	29.18	-6.61	4620	B9V	5.34	29.19	-6.41	5327	B8Ve	6.42	29.74	-6.14
3359	B2IV	4.99	30.71	-6.88	3940	B5Ib	3.54	30.74	-7.27	4621	B2IVne	2.60	29.28	-8.31	5336	B4V	5.06	29.70	-7.00
3361	B9p:Hg:	6.83	29.83	-5.76	3941	B3IV	6.12	30.54	-6.60	4625	B3IV	5.48	30.19	-6.95	5354	B2.5IV	3.55	29.94	-7.41
3363	B5III	5.99	30.68	-6.19	3943	B3V	6.05	30.14	-6.75	4638	B3V	3.96	29.51	-7.38	5358	B6Ib	4.33	30.68	-7.28
3371	B4IV	6.30	30.73	-6.17	3944	B9Ib	6.35	31.70	-6.06	4644	B8Ia-Iab	5.92	31.88	-6.51	5375	B1III	6.09	31.19	-7.01
3373	B4V	6.31	30.10	-6.59	3946	B4Ve	6.21	29.95	-6.74	4648	B4IV	5.76	30.29	-6.61	5376	B8V	5.56	29.66	-6.21
3375	B2.5V	6.39	30.62	-6.49	3949	B3V	6.20	30.05	-6.84	4653	B1.5Ia	6.22	32.37	-6.53	5378	B7IIIp	4.42	30.04	-6.43
3388	B2.5V	6.49	30.41	-6.70	3952	B2.5IV	5.66	30.50	-6.85	4656	B2IV	2.80	29.40	-8.19	5395	B2IV	4.56	30.19	-7.40
3389	B5III	5.96	30.31	-6.56	3955	B2.5V	6.20	30.33	-6.77	4662	B8IIIpHgMn	2.59	29.10	-7.18	5425	B2III	4.42	30.38	-7.47
3415	B3V+B3Vn	5.26	29.75	-7.14	3970	B9III-IV	4.60	29.09	-6.81	4674	B5Vn	4.26	29.17	-7.37	5439	B7V	5.87	29.81	-6.32
3440	B5V	5.48	29.74	-6.80	3971	B7IVne	6.14	29.97	-6.34	4692	B9V	6.21	29.67	-5.93	5440	B1.5Vne	2.31	29.19	-8.42
3442	B4IV	5.19	29.93	-6.97	3982	B7V	1.35	27.80	-8.33	4696	B8Vne	5.21	29.42	-6.46	5449	B8n	5.74	29.64	-6.23
3448	B7Vn	5.61	29.59	-6.53	3990	B3IV	4.86	29.94	-7.21	4706	B9V	5.39	29.13	-6.46	5453	B5V	4.05	29.24	-7.30
3453	B1.5V	5.90	30.54	-7.06	4009	B2IVpne	5.72	30.51	-7.08	4712	B9III	5.32	29.61	-6.38	5471	B3V	4.00	29.48	-7.41
3454	B3V	4.30	29.63	-7.26	4018	B4Ve	6.10	30.08	-6.61	4714	B9V	5.79	29.45	-6.15	5475	B9pMnHgSi	4.94	29.07	-6.52
3456	B6Iae	5.23	31.96	-6.67	4022	B2V	6.41	30.60	-6.77	4724	B9III	5.73	29.75	-6.24	5484	B9	5.73	29.39	-6.20
3457	B1.5III	4.33	30.33	-7.70	4037	B8III	3.32	28.79	-7.50	4729	B4IV	4.86	30.15	-6.76	5488	B2III	6.10	30.91	-6.93
3458	B9.5III-IV	6.37	29.86	-5.86	4038	B2IV-V	6.16	30.60	-6.88	4730	B0.5IV	1.33	29.67	-8.62	5500	B2.5Ve	5.91	30.08	-7.02
3462	B1.5Vn	5.51	30.55	-7.05	4056	B9V	5.96	29.49	-6.10	4731	B1V	1.73	29.46	-8.37	5517	B9V	5.77	29.98	-5.61
3468	B1.5III	3.68	30.08	-7.95	4064	B2.5IV	6.66	30.67	-6.68	4732	B3Vn	4.82	29.60	-7.29	5522	B9VSi:Cr:	6.14	29.56	-6.03
3470	B8V	6.20	29.69	-6.19	4074	B3IIIe	4.50	30.10	-7.22	4735	B9V	5.55	29.26	-6.33	5527	B8V+G3II	5.87	28.34	-7.45
3476	B0IIIn	5.16	30.96	-7.71	4082	B9pSiCr:Sr:	5.97	29.38	-6.22	4736	B8IV	6.00	29.78	-6.29	5528	B5IV	4.32	29.57	-7.13
3479	B2III	5.76	30.79	-7.05	4089	B8V	4.99	29.24	-6.64	4748	B8V	5.44	29.37	-6.51	5539	B3Vn	6.09	29.99	-6.90
3488	B9Ve	6.21	29.42	-6.18	4116	B9.5V	5.21	29.05	-6.42	4773	B5V	3.87	29.11	-7.43	5543	B7IIIp	5.03	29.93	-6.53
3489	B7III	6.21	30.19	-6.28	4119	B6V	5.09	29.44	-6.87	4787	B6IIIpe	3.87	29.32	-7.32	5551	B4Vnpe	5.11	29.43	-7.26
3490	B4V	6.37	30.06	-6.63	4123	B9Vn	5.58	29.26	-6.34	4798	B2IV-V	2.69	29.44	-8.04	5555	B9V	6.20	29.69	-5.90
3494	B3Ia	5.46	32.10	-6.67	4129	B4IV	6.19	30.11	-6.79	4804	B8Vne	6.49	29.40	-6.47	5557	B9.5V	5.91	29.43	-6.04
3498	B3Vne	4.49	29.50	-7.39	4133	B1Ib	3.85	30.83	-7.71	4823	B6IVe	4.93	29.86	-6.64	5559	B9V	5.64	29.26	-6.34
3501	B2IV-V	6.43	30.96	-6.52	4135	B6II	5.74	31.05	-6.33	4830	B1IIIe	5.31	30.48	-7.70	5565	B9V	6.29	29.57	-6.02
3502	B8V	5.47	29.26	-6.61	4136	B8II	6.09	30.93	-6.08	4832	B9V	6.08	29.42	-6.18	5571	B2III-IV	2.68	29.67	-8.04
3503	B8V	6.30	29.62	-6.25	4140	B4Vne	3.32	28.94	-7.75	4834	B7.5V	6.00	29.66	-6.35	5579	B8V	6.47	29.91	-5.96
3516	B9V	6.17	29.48	-6.11	4147	B7Iae	6.14	32.05	-6.56	4844	B2.5V	3.05	29.24	-7.87	5595	B3V	5.44	29.93	-6.96
3527	B0III	5.10	31.71	-6.96	4161	B5III-IV	7.07	30.66	-6.13	4848	B3V	4.65	29.64	-7.25	5597	B9pSiSrCr	6.37	29.52	-6.08
3536	B8III	5.59	29.86	-6.42	4173	B3IV	5.91	30.55	-6.59	4857	B8III	6.44	30.15	-6.13	5605	B5V	4.72	29.46	-7.08
3539	B3Vn	5.91	30.23	-6.66	4196	B4V	4.82	29.61	-7.08	4879	B8V	5.98	29.68	-6.20	5606	B5IV	4.82	29.74	-6.97
3560	B5III	5.78	30.26	-6.62	4198	B2.5Iae	5.38	31.76	-7.04	4887	B9Ia	5.76	32.04	-6.46	5614	B8V	6.67	29.83	-6.05
3562	B3IV	6.26	31.05	-6.09	4204	B2.5V	5.77	30.01	-7.10	4897	B4Vne	4.62	29.75	-6.94	5625	B7V	5.85	29.79	-6.34
3568	B5V	6.38	30.12	-6.42	4206	B4IVe	5.97	30.03	-6.87	4898	B2IV-V	4.03	30.05	-7.43	5626	B3V	4.05	29.41	-7.48
3571	B8.5II	3.84	29.90	-7.06	4219	B6V	5.34	29.61	-6.71	4899	B5Vne	5.17	29.89	-6.65	5628	B8.5III	6.01	29.94	-6.21
3574	B5V	4.69	29.35	-7.19	4220	B7IV	5.23	29.63	-6.68	4908	O9Ib	5.32	31.68	-7.52	5646	B9.5Vne	3.87	28.55	-6.92
3582	B2IV-V	4.92	30.17	-7.31	4221	B8.5IIIe	5.23	29.70	-6.45	4913	B8.5V	5.16	29.16	-6.57	5651	B3IV	4.82	30.04	-7.10
3593	B2.5Vn	6.07	30.22	-6.89	4222	B3IV	4.85	30.02	-7.13	4930	B1.5IIIne	6.03	30.69	-7.33	5661	B0.5Ve	5.73	30.61	-7.48
3600	B5V	5.55	29.71	-6.82	4234	B2.5IV	4.45	29.91	-7.44	4943	B9V	5.25	29.19	-6.40	5662	B9.5III	6.17	29.77	-6.04
3605	B9Si	5.23	29.09	-6.51	4239	B9.5IV-V	5.91	29.46	-6.09	4967	B7III	6.28	30.21	-6.25	5667	B9V+G5Ia	5.16	28.28	-7.26
3607	B8	6.74	29.67	-6.20	4250	B9Ia	5.25	31.99	-6.53	4975	B8V	4.60	29.28	-6.59	5668	B3IV	6.04	30.54	-6.60
3611	B6V	6.40	29.95	-6.37	4262	B6V	5.99	29.80	-6.52	4985	B9V	5.89	29.39	-6.20	5684	B3V	6.28	30.17	-6.72
3623	B8IIIpMn	5.24	29.74	-6.54	4290	B8IV	6.16	29.96	-6.12	4990	B9III	6.28	29.65	-6.35	5685	B8V	2.61	28.35	-7.53
3629	B2IV-V	6.11	30.58	-6.90	4292	B8.5V	5.81	29.54	-6.19	5018	B9.5V	6.20	29.44	-6.03	5687	B7V	5.59	29.64	-6.48
3642	B2IVe	4.71	30.04	-7.55	4316	B9.5V	6.13	29.47	-5.99	5026	B6V	5.48	29.88	-6.44	5704	B5IV+F8	4.51	29.14	-7.55
3652	B8IIIpMn	5.32	29.88	-6.40	4329	B2V	5.57	30.15	-7.22	5027	B0.5Ia	6.02	31.79	-7.28	5708	B2IV-V	3.37	29.55	-7.93
3654	B5Ia	5.00	31.52	-7.13	4338	B9Ia	5.13	31.81	-6.70	5030	B6V	6.05	29.42	-6.89	5712	B4V	4.54	29.55	-7.14
3656	B6V	6.00	29.73	-6.59	4342	B7III	6.88	30.50	-5.97	5036	B2.5Ib	5.83	31.60	-6.67	5718	B9Vn	5.37	29.17	-6.43
3658	B2III-IV	5.79	30.79	-6.93	4355	B8V	5.23	29.15	-6.72	5039	B6IV	6.38	30.25	-6.26	5730	B3IVe	5.49	30.38	-6.76
3661	B8Vp:Si:	5.57	29.37	-6.51	4361	B1.5V	5.74	30.42	-7.19	5051	B9V	6.63	29.54	-6.05	5736	B4Vp	5.45	29.90	-6.80
3663	B3III	3.97	29.75	-7.57	4386	B9.5V s	4.05	28.53	-6.94	5063	B3IV	6.28	30.71	-6.43	5753	B7V	6.46	29.73	-6.39
3670	B9Ve	5.92	29.32	-6.27	4387	B9.5-A0V	6.27	29.40	-6.07	5103	B8III	6.33	30.35	-5.93	5764	B2Vn	5.50	30.25	-7.12
3672	B5.5IV-V	5.85	29.95	-6.57	4389	B4V	6.41	30.28	-6.41	5115	B8IV	6.34	29.72	-6.36	5770	B9V	6.22	29.69	-5.91
3680	B8V	6.25	29.70	-6.18	4390	B5Vn	3.89	29.24	-7.30	5132	B1III	2.30	29.98	-8.23	5773	B9V	6.36	29.63	-5.96
3683	B9III	5.47	29.65	-6.35	4401	B5V	5.11	29.41	-7.13	5140	B9III	5.38	29.84	-6.16	5778	B6Vnne	4.14	29.24	-7.08
3691	B7IV	6.02	29.98	-6.33	4403	B2IV-V	6.12	30.67	-6.81	5141	B8Vn	5.01	29.66	-6.22	5780	B6IV	5.17	29.71	-6.80
3703	B7.5III	5.26	29.68	-6.70	4406	B2IV-V	5.59	30.56	-6.92	5157	B8III	5.98	30.16	-6.13	5782	B7III-IV	5.65	30.07	-6.31
3708	B6Iae	5.87	31.43	-7.18	4415	B3IV	5.30	30.13	-7.01	5187	B9pEuCr	5.70	29.35	-6.25	5786	B9V	5.95	29.60	-6.00
3710	B8V	6.39	29.68	-6.19	4423	B9V	5.08	29.21	-6.39	5190	B2IV	3.41	30.03	-7.56	5790	B8V	6.24	29.72	-6.15
3715	B9.5V	6.82	29.51	-5.96	4425	B3V	6.09	29.98	-6.90	5191	B3V	1.86	28.52	-8.37	5801	B7IV	6.19	29.84	-6.47
3717	B5V	6.28	30.16	-6.38	4456	B4V	5.95	30.01	-6.68	5193	B2IV-Ve	3.04	29.67	-7.81	5805	B9V	6.57	29.80	-5.80
3734	B2IV-V	2.50	29.24	-8.24	4460	B9Ve	4.62	28.94	-6.66	5206	B2Vp	5.77	30.49	-6.89	5812	B2.5V	3.66	29.38	-7.73
3745	B6Ve	6.10	29.74	-6.58	4468	B9.5Vn	4.70	28.90	-6.57	5210	B5IIIp	4.56	29.93	-6.95	5833	B9V	6.00	29.43	-6.17
3774	B9V	6.46	29.62	-5.97	4472	B2.5IV	5.83	30.43	-6.92	5211	B8V	6.06	29.69	-6.19	5834	B7V	5.07	29.45	-6.67
3784	B8V	5.45	29.36	-6.52	4493	B9pHgMn:	6.37	29.66	-5.94	5221	B4IV	4.73	29.89	-7.02	5849	B9IV+A3V	3.84	28.79	-7.01
3817	B4IV	5.12	29.84	-7.07	4494	B9V	4.70	29.10	-6.49	5231	B2.5IV	2.55	29.44	-7.91	5857	B9pSiCr	5.51	29.17	-6.42
3819	B1.5IV	5.01	30.35	-7.45	4519	B6III	5.29	30.10	-6.55	5240	B9III	6.09	29.77	-6.22	5860	B7Vn	5.61	29.63	-6.49
3825	B5II	4.08	29.99	-7.53	4537	B3Vne	4.32	29.46	-7.43	5248	B2IV	3.83	30.10	-7.49	5863	B8III	5.40	29.61	-6.68
3868	B4V	6.00	30.04	-6.65	4549	B4V	4.90	29.62	-7.07	5249	B2IV-V	3.87	30.05	-7.43	5869	B9Vn:	5.77	29.32	-6.28
3872	B6V	6.15	29.93	-6.39	4552	B9IIIpSi	4.28	29.20	-6.80	5250	B8VpShell	5.15	29.29	-6.58	5873	B2II	5.73	30.91	-7.20
3878	B0.5IIIn	6.45	31.28	-7.16	4573	B3V	5.57	29.94	-6.95	5281	B0Ia	6.42	31.95	-7.27	5885	B3V	4.64	29.44	-7.45
3883	B8III-IV	6.46	30.02	-6.16	4576	B8III	5.44	29.74	-6.55	5285	B2V	4.36	30.06	-7.32	5898	B9II	6.15	30.61	-6.30
3886	B2.5IV	5.55	30.42	-6.92	4590	B1.5V	5.26	30.38	-7.22	5292	B5IV	6.34	30.01	-6.70	5904	B2.5Vn	4.59	29.57	-7.54
3891	B7III	6.26	29.99	-6.47	4597	B9V	5.89	29.67	-5.92	5294	B9V	6.17	29.97	-5.62	5906	B6IVn	5.39	29.71	-6.79

Table 3. continued

HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log
5907	B2.5Vne	5.42	29.86	-7.24	6334	B1Ia	4.87	31.34	-7.62	6779	B9.5V	3.83	28.43	-7.04	7178	B9III	3.24	28.53	-7.47
5910	B6Vp	6.14	29.94	-6.38	6347	O9.5Iab	6.13	31.25	-7.97	6787	B2IV	4.36	30.02	-7.57	7179	B3V	6.22	29.98	-6.91
5912	B8IIIp	5.87	29.94	-6.34	6352	B9.5V	6.17	29.26	-6.21	6788	B1V	6.16	31.03	-6.81	7185	B5IV	6.41	30.17	-6.54
5918	B6V	6.03	29.54	-6.77	6353	B1V	5.64	30.08	-7.74	6802	B9IVpSrEuCr	6.51	30.02	-5.77	7188	B9.5V	4.75	29.07	-6.40
5920	B7III	5.75	30.03	-6.44	6356	B8II-III	6.39	30.72	-5.93	6803	B9V+F7III	6.09	28.23	-7.24	7200	B2IV-V	6.69	30.41	-7.07
5926	B9V	5.62	29.16	-6.43	6387	B9Vn:	6.14	29.58	-6.02	6804	B2.5III	5.47	30.96	-6.60	7202	B5V	5.69	29.62	-6.92
5928	B2IV-V	3.88	29.87	-7.61	6389	B1II	6.01	31.52	-6.97	6808	B9V	6.33	29.84	-5.75	7210	B2.5IV	5.38	30.14	-7.21
5931	B8III	6.26	30.11	-6.17	6395	B9V	6.29	29.22	-6.37	6812	B8Iap	3.86	31.29	-7.28	7212	B5IV	6.39	30.18	-6.53
5934	B3V	5.85	29.82	-7.07	6396	B6III	3.17	28.67	-7.98	6819	B3IIIep	5.33	30.54	-6.78	7230	B9V	5.97	29.36	-6.23
5937	B5IV	6.10	30.08	-6.63	6403	B9.5V	6.21	29.68	-5.78	6821	B9V	6.06	29.78	-5.81	7239	B8IV	6.03	29.74	-6.34
5938	B9pe	5.75	29.47	-6.13	6411	B9V+B9.5V	5.41	29.42	-6.17	6822	B0Ia	5.38	31.76	-7.47	7241	B8III	6.29	30.08	-6.20
5941	B5IIIp	4.88	29.86	-7.01	6414	B5Vnn+B5V	5.88	29.71	-6.83	6823	O9.5II	5.95	31.58	-7.47	7245	B9III	6.56	29.77	-6.23
5942	B5IV	5.43	30.00	-6.71	6420	B9V	5.76	29.30	-6.30	6826	B9IIIn	6.04	29.69	-6.30	7246	B9III	6.30	29.88	-6.12
5944	B1V+B2V	2.89	29.62	-8.21	6422	B5Vn	6.36	29.77	-6.76	6833	B3V+A	6.16	30.46	-6.43	7248	B8III	5.09	29.47	-6.82
5951	B9.5V	6.25	29.54	-5.93	6423	B9V+F8III	6.27	29.10	-6.47	6839	B0.5Ia	6.30	32.61	-6.48	7249	B2Ve	5.54	30.19	-7.18
5958	B2e+M3+Q	2.00	28.33	-9.04	6427	B9.5V+A6III	6.65	29.29	-6.16	6845	B7IV	5.59	29.57	-6.74	7257	B6V+F1IV	5.88	29.98	-6.34
5967	B6IV	4.89	29.76	-6.75	6431	B1.5Vp+B5III	4.82	29.96	-7.65	6848	B0Ib	6.84	31.74	-7.15	7258	B3V	6.49	30.13	-6.76
5982	B9III	4.76	29.40	-6.59	6440	B2IV	5.70	30.77	-6.82	6851	B5V	6.30	29.92	-6.62	7262	B6IV	5.28	29.66	-6.84
5985	B2V	4.92	29.84	-7.53	6447	B8Ib-II	5.77	31.36	-6.05	6852	B9V	5.99	29.22	-6.38	7268	B7IIIMn	6.36	30.22	-6.24
5987	B2.5Vn	4.23	29.64	-7.47	6450	B4Ia	6.41	31.46	-7.18	6873	B3Ve	6.13	29.97	-6.92	7269	B5Vn	6.34	29.96	-6.58
5993	B1V	3.96	29.76	-8.07	6451	B2IIIne	5.25	30.78	-7.06	6875	B2.5Vn	5.25	30.31	-6.80	7270	B9	6.30	29.67	-5.92
5994	B9.5V	5.57	29.28	-6.18	6453	B2IV	3.27	29.67	-7.92	6878	B9.5V	6.33	29.19	-6.27	7279	B3V	5.34	29.40	-7.49
5998	B7IIIp:	6.33	30.28	-6.18	6460	B7III	5.12	29.82	-6.65	6881	B8IV-Ve	5.73	29.43	-6.55	7283	B9pSi	5.98	29.35	-6.25
6002	B9.5Vnn	5.78	29.22	-6.24	6471	B7.5V	6.24	30.06	-5.94	6893	B5IV	6.30	30.48	-6.23	7285	B9IV	6.73	29.65	-6.14
6003	B9IVp:	5.88	29.51	-6.28	6473	B9Vn	6.21	29.42	-6.17	6897	B3IV	3.51	29.85	-7.29	7287	B8II-III	5.15	30.00	-6.65
6007	B8V	5.54	29.57	-6.30	6475	B8.5V	6.19	29.78	-5.95	6900	B9V	6.74	29.57	-6.02	7298	B2.5IV	4.39	29.64	-7.70
6023	B9p:Mn:	4.26	28.97	-6.62	6477	B7V+B9.5V	5.29	29.58	-6.55	6912	B8V	6.27	29.78	-6.10	7305	B8V	6.54	29.73	-6.15
6026	B8V+B9VpSi	6.30	29.54	-6.33	6478	B9II	5.92	30.78	-6.14	6919	B8V	6.20	29.59	-6.28	7306	B4IV	4.77	29.47	-7.43
6027	B3V	4.01	29.19	-7.70	6482	B9V	6.35	29.44	-6.15	6921	B8	6.63	30.09	-5.78	7316	B3V	5.59	30.03	-6.86
6045	B8V	5.14	29.26	-6.62	6485	B9.5III	4.52	28.88	-6.93	6924	B3V	6.53	30.10	-6.79	7318	B0.5IV	5.43	30.46	-7.83
6066	B9V	6.61	29.73	-5.86	6494	B9IV	6.00	29.61	-6.18	6928	B8III-IV	5.73	29.67	-6.50	7335	B2IVe	6.60	30.75	-6.84
6079	B8V	5.48	29.17	-6.70	6497	B9.5V+G0V	6.06	28.69	-6.73	6929	B2IVpe	6.59	30.88	-6.71	7336	B9III	5.49	29.53	-6.46
6080	B9V	6.12	29.51	-6.08	6502	B5V	5.54	29.73	-6.81	6932	B9pSiCr	5.96	29.50	-6.10	7337	B9V	4.01	28.73	-6.86
6083	B6IV	5.33	29.71	-6.79	6505	B7II-III	5.95	30.72	-6.12	6934	B6IV	4.96	30.04	-6.47	7339	B5V	6.26	30.14	-6.40
6092	B5IV	3.89	29.53	-7.18	6510	B2Vne	2.95	29.44	-7.94	6938	B3III	5.07	30.66	-6.65	7342	B2Vpe+A2IaShell	4.61	29.52	-7.84
6096	B9V	6.23	29.31	-6.28	6519	B9.5Ve	4.81	28.85	-6.62	6941	B2V	6.69	30.24	-7.12	7346	B9V	6.31	29.36	-6.23
6100	B8IV	5.42	29.55	-6.52	6520	B9p	6.05	29.48	-6.11	6943	B6IV	5.90	29.82	-6.68	7347	B3IVp	6.31	30.50	-6.64
6113	B2V	5.92	30.34	-7.03	6523	B9Ib-II	5.84	31.06	-6.27	6946	B2V	5.72	29.66	-7.69	7355	B2Vn	6.04	30.51	-6.87
6114	B9II-III	5.69	30.19	-6.27	6525	B5II-III	6.28	31.10	-6.10	6953	B9V	5.65	29.61	-5.98	7361	B9IVpHgMn	6.52	29.42	-6.37
6115	B4V	4.47	29.28	-7.41	6530	B9III	6.10	29.90	-6.10	6960	B2IV-V	5.28	30.53	-6.94	7364	B9.5V	6.40	29.41	-6.05
6117	B9pCr	4.57	28.84	-6.75	6532	B9.5VpHgMn	6.42	29.35	-6.11	6967	B8IIIpSiSr:	6.42	30.01	-6.27	7372	B3IV	4.97	29.74	-7.41
6118	B2IV:pe	4.42	29.47	-8.09	6544	B8Vn	5.55	29.26	-6.62	6968	B8IV	5.48	29.40	-6.68	7374	B5V	6.53	29.93	-6.61
6131	B1.5Iape	5.35	30.99	-7.87	6558	B8V	6.10	29.74	-6.13	6971	B4Ve	6.59	30.02	-6.67	7378	B8Vn	5.72	29.38	-6.49
6134	B4Ve+M1.5Iab-Ib	0.96	24.96	-11.21	6567	B8II-IIIp:Mn	4.62	29.54	-7.10	6974	B9.5V	6.56	29.31	-6.15	7380	B9V	5.67	29.35	-6.25
6141	B2V	4.79	29.79	-7.58	6588	B3IV	3.80	29.42	-7.72	6984	B5Vne	6.10	29.87	-6.67	7381	B9III	6.51	29.75	-6.25
6142	B1Iae	5.33	31.31	-7.64	6601	B1.5V	6.30	29.83	-7.74	6989	B9IV	6.47	29.45	-6.33	7395	B9pSi	5.15	29.05	-6.54
6143	B2III-IV	4.23	30.17	-7.55	6613	B9V+A1V	6.43	29.69	-5.90	6990	B8III	5.81	29.87	-6.41	7396	B4III	6.32	30.51	-6.56
6158	B9.5III	5.63	29.57	-6.24	6620	B9pHgMn	5.94	29.32	-6.27	6992	B9V	6.42	29.45	-6.14	7397	B6III	5.85	29.90	-6.75
6168	B9V	4.20	28.61	-6.98	6621	B4IVe	6.35	30.15	-6.75	6997	B8II-IIIpHg	5.42	30.04	-6.60	7401	B8IVHe wk	6.60	29.71	-6.37
6172	B7IVe	5.91	30.19	-6.12	6622	B2V+B3V	5.92	30.51	-6.87	7017	B9V	6.25	29.28	-6.31	7409	B5Vn	6.33	29.93	-6.61
6174	B2.5IV	5.83	30.30	-7.05	6628	B8V	4.83	29.06	-6.81	7027	B9.5IV-V	6.06	29.67	-5.88	7417	B9.5V+K3II	3.08	26.26	-9.01
6176	B9pSiCrSr:	6.30	29.62	-5.98	6632	B9.5III-IV	6.09	29.80	-5.93	7029	B2.5V	4.87	30.07	-7.04	7418	B8Ve	5.11	29.03	-6.85
6178	B9-A0V+B	5.91	29.30	-6.29	6633	B9.5V	6.22	29.25	-6.21	7030	B8V	6.41	29.55	-6.33	7419	B9.5III	6.25	29.63	-6.18
6185	B9V	5.08	29.04	-6.55	6647	B6V	5.90	30.05	-6.27	7031	B7+K3II	5.43	28.41	-7.60	7426	B3IV	4.74	29.83	-7.31
6188	B1Iab-Ib	5.65	31.66	-7.00	6652	B9.5V	6.45	29.73	-5.74	7035	B5V	5.83	29.81	-6.72	7437	B8IIIn	5.00	29.34	-6.95
6209	B6.5V	6.12	29.87	-6.35	6657	B8V	6.17	29.85	-6.03	7039	B8III	3.17	29.06	-7.22	7446	B0.5III	4.95	30.60	-7.83
6210	B9II-III	6.05	30.37	-6.09	6660	B9V	6.38	29.77	-5.82	7040	B9V	5.02	28.92	-6.67	7447	B5III	4.36	29.62	-7.26
6211	B8V	6.46	29.84	-6.03	6662	B9V+B9V	5.96	29.62	-5.97	7058	B9pSiCr:	6.51	29.43	-6.16	7452	B9pSi:Cr:	6.32	29.33	-6.26
6214	B3V	5.71	30.05	-6.84	6664	BepShell	6.68	30.90	-7.44	7068	B9IV	5.61	29.79	-6.00	7457	B8Vne	6.05	29.59	-6.28
6215	B2IV-V	5.74	30.50	-6.98	6668	B9.5V	5.96	29.60	-5.86	7073	B6V	6.07	29.69	-6.63	7466	B5V	6.43	30.00	-6.54
6219	B0.5Ia	5.58	32.14	-6.95	6671	B9.5III	6.06	29.74	-6.07	7074	B2II-IIIe	4.22	30.79	-7.19	7467	B5II-III	6.50	30.88	-6.32
6224	B9.5III	6.03	29.66	-6.15	6684	B2IV-V	5.82	30.22	-7.26	7081	B3IVp	6.06	30.23	-6.92	7470	B9.5V+A3IV	6.34	29.44	-6.03
6233	B8II-III	6.13	30.59	-6.06	6690	B9III	6.29	29.87	-6.13	7093	B4III	6.31	30.93	-6.14	7471	B3III	6.35	30.62	-6.70
6234	B9pCr:	5.24	29.08	-6.51	6692	B3IV	6.01	30.62	-6.53	7100	B3IV	5.91	30.23	-6.91	7474	B3V+B3V	5.17	29.54	-7.34
6244	B9pSi*	6.11	29.30	-6.29	6700	B9V	4.76	29.12	-6.48	7105	B8V	6.63	29.92	-5.95	7482	B0.5Iae	6.50	31.52	-7.54
6245	O8Iaf	5.22	31.55	-7.96	6708	B7IV	6.30	30.26	-6.05	7109	B8Vnn	6.14	29.34	-6.53	7485	B6IV	6.64	30.07	-6.43
6247	B1.5V+B6.5V	3.08	29.50	-8.10	6712	B2Ve	4.64	29.76	-7.61	7113	B9II-IIIpHg	5.48	29.85	-6.60	7486	B5V	6.01	29.71	-6.83
6252	B2IV	3.57	29.82	-7.76	6714	B5Ib	3.97	30.86	-7.16	7115	B6IV	6.09	29.93	-6.57	7491	B8	6.16	29.57	-6.30
6261	B1Ia	6.32	31.52	-7.42	6716	B0Ib	5.77	31.66	-7.25	7116	B9V+K2Ib	4.83	26.84	-8.45	7493	B9IIIpHgMn	6.34	29.68	-6.32
6262	B1Iape	4.73	30.85	-8.09	6718	B9pSiSr	6.48	29.44	-6.16	7118	B9IIIpSi	6.28	29.67	-6.33	7507	B8V	5.52	29.28	-6.59
6263	O9Ib	6.45	31.63	-7.57	6719	B2IV	6.34	30.78	-6.81	7119	B5II	5.10	30.38	-7.13	7508	B7V+G1:III	6.28	27.92	-7.99
6268	B9.5pCr:	6.52	29.53	-5.94	6720	B8Vne	6.50	29.72	-6.15	7121	B2.5V	2.02	28.87	-8.24	7511	B9III-IV	6.26	29.61	-6.29
6272	O8Iafpe	5.77	31.66	-7.85	6727	B0.5III	6.74	31.55	-6.88	7128	B8	5.93	29.58	-6.29	7512	B8III	6.05	29.89	-6.39
6274	B3Vnep	6.33	30.21	-6.68	6732	B9V	6.76	29.43	-6.16	7129	B8IVSi	5.38	29.78	-6.30	7516	B3III	6.48	30.58	-6.73
6275	B9V	5.94	29.66	-5.94	6738	B3IV	5.28	30.01	-7.13	7131	B2.5V	5.58	29.91	-7.19	7527	B5V	6.21	30.31	-6.23
6281	B8V	4.38	28.92	-6.96	6741	B3Vn	6.21	30.08	-6.81	7143	B9III	6.22	29.80	-6.20	7529	B9.5VpSi	6.43	29.43	-6.03
6283	B0.5Ia	6.15	31.78	-7.29	6743	B2Ib	3.66	31.13	-7.26	7147	B9pSi	6.63	29.46	-6.13	7543	B8Vn	5.77	29.40	-6.47
6289	B9IV	5.55	29.45	-6.34	6755	B8III-IV	5.85	29.48	-6.69	7158	B9IIep:Hg:	5.57	29.34	-6.66	7551	B0.5Ib	6.44	31.44	-7.25
6294	B6V+B7V	6.27	29.75	-6.56	6759	B7.5II	6.15	31.26	-5.85	7166	B5IV	5.53	29.95	-6.75	7554	B2.5IVe	6.51	30.58	-6.77
6304	B2IVne	6.11	30.78	-6.81	6762	B0.5Ib	6.28	31.67	-7.03	7169	B9V	6.69	29.68	-5.91	7556	B5V	6.38	29.95	-6.58
6316	B8V	5.03	29.32	-6.56	6772	B1II	6.58	31.98	-6.52	7171	B7III-IV	6.50	29.97	-6.42	7565	B2.5Ve	4.95	29.74	-7.37
6320	B5IV	5.73	30.26	-6.45	6773	B3III	6.61	30.86	-6.46	7173	B2Vp	6.75	29.97	-7.39	7567	B1III+B3V	5.69	30.79	-7.41
6326	B9pCrEu	6.31	29.38	-6.22	6774	B7.5II-III	6.73	31.01	-5.74	7174	B7IV	5.89	29.77	-6.54	7572	B7V	6.54	29.86	-6.26

Table 3. continued

HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log	HR No.	SpType	V mag	L_x log	L_x/L_{Bol} log
7574	O7.5Iaf	6.23	31.85	-7.70	7978	B8Vnp	6.29	29.46	-6.41	8427	B2V	6.27	30.18	-7.19	9086	B9IIIpHg:Mn:	6.25	29.73	-6.26
7580	B9.5Vn	6.53	29.42	-6.05	7983	B4Ve	6.33	29.95	-6.74	8438	B7Vne	5.78	29.56	-6.57	9087	B7III-IV	5.10	29.71	-6.68
7587	B9.5IV	5.26	29.39	-6.24	7985	B9III	5.55	29.58	-6.42	8439	B2.5IV	5.81	30.58	-6.76	9091	B4III	5.01	30.21	-6.86
7589	O9.5Ia	5.62	31.62	-7.81	7992	B5IV	6.24	30.22	-6.49	8452	B7III	5.46	29.99	-6.48	9097	B3Ia	6.24	31.77	-6.99
7591	B2III	5.91	30.74	-7.10	7993	B0.5V	6.45	30.39	-7.69	8473	B9pHgMn:	6.37	29.50	-6.10	9098	B9.5Vn	4.55	28.78	-6.69
7592	B9.5III	4.58	28.98	-6.83	7996	B3III	6.44	30.85	-6.46	8478	B8III	5.43	30.01	-6.27	9105	B9III	6.01	29.49	-6.50
7593	B7Vn	5.71	29.57	-6.55	8001	B5V	4.78	29.41	-7.12	8490	B8Vn	6.11	29.43	-6.45	9108	B8IV-V	5.59	29.54	-6.43
7594	B8V	6.49	29.70	-6.17	8007	B2IIIe	6.56	31.04	-6.80	8512	B8IIIpMn:Hg:	5.37	29.71	-6.58	9110	B8IVpHgMn	5.80	29.57	-6.51
7600	B0.5IIIn	6.29	31.10	-7.33	8009	B8Vnne	6.70	29.70	-6.18	8513	B5IV	5.37	29.71	-6.99					
7607	B6V+A5V	6.57	29.90	-6.42	8014	B8Vn	6.57	29.76	-6.11	8520	B2IV-Ve	5.01	30.05	-7.43					
7608	B5V	5.14	29.29	-7.25	8020	B8Ia	5.67	31.48	-7.07	8522	B9III	4.81	29.09	-6.91					
7613	B5IV	4.94	29.58	-7.13	8022	B5V	6.63	29.90	-6.64	8523	B6V	4.57	29.09	-7.22					
7620	B5IV	6.02	30.07	-6.63	8029	B2.5IV	6.23	30.45	-6.89	8528	B5V	6.41	29.95	-6.59					
7622	B9III	5.53	29.54	-6.45	8033	B9pSi	6.25	29.51	-6.09	8535	B8III-IV	6.16	29.84	-6.34					
7623	B3IV	4.37	29.82	-7.33	8036	B7III	6.16	30.02	-6.44	8541	B9Iab	4.57	31.11	-7.05					
7628	B5V	5.45	29.65	-6.89	8040	B5Vn	5.61	29.56	-6.97	8549	B2V	6.46	30.37	-7.01					
7640	B9Vn	5.49	29.07	-6.53	8047	B1ne	4.74	29.92	-7.91	8550	B9	6.76	29.43	-6.16					
7642	B5IV	6.32	30.13	-6.57	8053	B1Ve	5.37	30.44	-7.40	8553	B2V	6.14	30.29	-7.09					
7647	B3IVe	5.19	30.02	-7.12	8054	B6V	6.50	29.90	-6.42	8554	B5III	6.57	30.42	-6.46					
7651	B5III	6.15	30.21	-6.66	8065	B8III	5.83	29.69	-6.59	8561	B0.5Ibe:	5.46	30.72	-7.96					
7656	B4V	5.88	29.83	-6.86	8094	B9VpSi	5.59	29.17	-6.42	8567	B8V s	6.37	29.72	-6.16					
7664	B9pHgMn	5.67	29.30	-6.30	8103	B4IVpe	6.63	30.56	-6.34	8572	B8V+M0II	4.36	26.02	-9.43					
7668	B8	6.53	29.95	-5.92	8105	B1Vp	6.54	30.88	-6.96	8574	B9.5V	5.65	29.08	-6.39					
7678	B1.5Ia	5.64	31.04	-7.82	8107	B6IV	6.46	30.02	-6.48	8579	B2IV	4.51	29.78	-7.81					
7688	B3V	5.07	29.66	-7.23	8109	B7III	6.54	30.10	-6.36	8597	B9IV-Vn	4.02	28.87	-6.82					
7691	B7V+A3V	6.37	29.91	-6.21	8112	B8Vn	5.91	29.20	-6.68	8603	B2Ve	5.73	30.15	-7.23					
7694	B9.5III	6.18	29.61	-6.20	8118	B9pHgMn	6.77	29.72	-5.88	8606	B3V	6.29	29.94	-6.96					
7699	B5Ib	6.11	31.25	-6.75	8125	B8V	6.31	29.89	-5.98	8628	B8V	4.17	29.06	-6.81					
7700	B3V	6.31	30.16	-6.73	8136	B4IV	6.46	30.29	-6.62	8634	B8V	3.40	28.43	-7.44					
7708	B2.5Ve	4.93	29.65	-7.46	8137	B8III	5.43	29.79	-6.49	8640	B2III	5.25	30.50	-7.34					
7709	B1V	6.49	31.04	-6.79	8141	B5V	5.82	29.80	-6.74	8651	B1V	6.43	30.59	-7.25					
7710	B9.5III	3.23	28.49	-7.32	8143	B9Iab	4.23	31.09	-7.07	8663	B6IV	5.35	30.00	-6.51					
7716	B1Ibe	6.26	31.59	-6.95	8144	B7Vn	6.19	29.70	-6.42	8677	B9.5IV	6.36	29.49	-6.15					
7717	B9pCrEu:Sr:	6.27	29.38	-6.22	8146	B2Vne	4.43	29.67	-7.70	8682	B5Vne	6.12	29.86	-6.67					
7719	B7Ve	5.92	29.60	-6.52	8153	B2IIIe	6.42	30.41	-7.41	8690	B3IV:	5.92	29.89	-7.24					
7721	B7V	6.92	29.89	-6.23	8158	B6IV	6.29	30.03	-6.47	8704	B9III	5.80	30.00	-6.00					
7735	B3V+K2II	3.79	26.90	-9.71	8161	B6V	5.76	29.59	-6.73	8705	B8V	6.46	29.61	-6.26					
7737	B9IV-V	6.71	29.65	-6.04	8164	32pe+B3V+M1Ibe	5.66	27.67	-9.38	8706	B7III-IV	6.34	29.97	-6.41					
7738	B9pHg	6.32	29.62	-5.98	8171	B3IVe	5.18	29.69	-7.45	8725	B2IV	5.59	30.33	-7.25					
7739	B3Ve	4.78	29.53	-7.36	8176	B3IV	6.38	30.35	-6.79	8731	B4IIIep	5.43	30.15	-6.92					
7751	B3V+K3Ib	3.98	26.55	-9.97	8206	B9pSi:Cr:Sr:	6.58	29.43	-6.16	8733	B2IV-V	6.18	30.43	-7.05					
7757	B6III	6.48	30.22	-6.43	8209	B0Ib	5.94	31.70	-7.21	8745	B9III	6.43	29.66	-6.34					
7763	B2pe	4.81	28.98	-8.36	8215	B3V	5.31	29.80	-7.09	8753	B9IIIpMn	6.60	29.87	-6.13					
7773	B9.5V	4.76	28.93	-6.54	8218	B6V	6.03	29.69	-6.63	8758	B3Vpe	6.54	30.10	-6.79					
7777	B2V	6.45	30.38	-7.00	8226	B8III	6.12	29.48	-6.80	8762	B6IIIpe+A2p	3.62	29.01	-7.64					
7786	B8.5IIIpSi	6.50	29.88	-6.27	8227	B7V	5.44	29.27	-6.86	8768	B2V	6.39	30.21	-7.16					
7789	B8IIIne	5.54	29.59	-6.69	8231	B9.5V	6.08	29.40	-6.07	8770	B9IIIHe wk	6.50	29.82	-6.18					
7790	B2IV	1.94	29.17	-8.41	8240	B9pSiSrCr	6.70	29.74	-5.85	8773	B6Ve	4.53	29.23	-7.09					
7803	B9V	6.15	29.38	-6.21	8242	B9V+G2Ib	6.16	27.94	-7.51	8777	B2V	6.74	30.36	-7.02					
7807	B2Ven	5.90	30.25	-7.12	8243	B1II	5.53	30.70	-7.78	8781	B9V	2.49	27.83	-7.76					
7814	B8II-III	5.25	30.10	-6.55	8244	B8III	6.41	30.25	-6.03	8797	B0.5IV	4.85	30.31	-7.98					
7815	B9.5III	6.51	29.51	-6.30	8259	B9IIIe	6.15	29.55	-6.45	8800	B2V	6.66	30.40	-6.97					
7817	B8II-III	6.10	30.38	-6.27	8260	B2.5Vpe	4.68	29.75	-7.36	8803	B2V	6.40	30.21	-7.17					
7821	B9V	6.13	29.49	-6.11	8279	B2Ib	4.73	30.45	-7.91	8808	B3V	6.26	29.83	-7.06					
7827	B9V	6.36	29.20	-6.39	8286	B8IV	6.01	30.11	-5.97	8821	B9III	5.39	29.46	-6.54					
7840	B8V	7.11	29.83	-6.05	8292	B5IV	6.09	30.19	-6.51	8854	B0Vn	6.53	30.45	-7.87					
7843	B9Vne	5.91	29.09	-6.51	8301	B3IV	4.67	29.71	-7.43	8861	B9pSi	6.48	29.49	-6.10					
7844	B2.5IV	4.95	29.88	-7.46	8327	O9Ib-II	5.95	30.91	-8.23	8873	B8III	6.32	29.87	-6.41					
7856	B8V	6.40	30.00	-5.87	8335	B3III	4.23	29.77	-7.55	8887	B6III	5.32	29.71	-6.94					
7861	B4III	6.60	30.50	-6.56	8338	B8V	6.12	29.48	-6.40	8891	B9.5V	6.29	29.37	-6.10					
7862	B3IV	6.48	30.56	-6.59	8341	B2V	6.29	30.44	-6.94	8902	B8III	6.72	30.03	-6.25					
7866	B3V+K2Ib	4.61	26.76	-9.72	8348	B8III	5.77	29.92	-6.37	8903	B9III	5.57	29.36	-6.64					
7870	B9pSi	5.78	29.28	-6.32	8349	B9pHgMn	6.17	29.36	-6.24	8910	B9V	6.20	29.77	-5.82					
7878	B8IIIp	6.22	29.97	-6.31	8353	B8III	3.01	28.91	-7.37	8913	B9III	5.75	29.53	-6.47					
7880	B9V	5.59	29.13	-6.47	8355	B9V	6.59	29.75	-5.84	8936	B8V	6.65	29.74	-6.14					
7881	B9III	5.15	29.80	-6.20	8356	B3Ve	5.08	29.79	-7.10	8962	B8V	5.80	29.44	-6.43					
7885	B8IIIn	6.32	30.01	-6.28	8357	B6IV-V	5.71	29.53	-6.88	8965	B8V	4.29	28.91	-6.96					
7889	B6III	5.22	29.95	-6.70	8371	B8Ib	5.80	30.14	-7.61	8967	B9V	5.30	29.06	-6.53					
7890	B7IIIne	6.22	30.12	-6.34	8375	B2.5Ve	5.86	29.83	-7.27	8976	B9IVn	4.14	28.84	-6.95					
7894	B5IV	5.04	29.62	-7.08	8377	B8V	6.42	29.59	-6.28	9005	B2IV	5.95	30.55	-7.04					
7899	B3V	5.97	29.99	-6.90	8381	B9IV-V	6.01	29.61	-6.08	9006	B3V	5.18	30.11	-6.78					
7906	B9IV	3.77	28.61	-7.18	8383	B8Ve+M2Iaep	4.91	26.05	-9.36	9011	B3IV	6.07	30.39	-6.76					
7911	B6IIIpMn	6.06	30.11	-6.53	8384	B2V	6.43	30.23	-7.14	9031	B9pSiSrCr	5.18	29.19	-6.40					
7912	B5IV	6.58	30.18	-6.53	8385	B3III	6.00	30.67	-6.65	9048	B9V	6.21	29.47	-6.13					
7922	B6III	6.51	30.26	-6.39	8386	B8V	5.42	29.42	-6.46	9049	B6V	6.10	29.92	-6.40					
7926	B8II-III	5.67	30.09	-6.55	8397	B5IIIn	6.37	30.52	-6.35	9050	B8V	6.83	29.99	-5.89					
7927	B2IV-Ve	6.66	30.67	-6.81	8399	B0IV	6.66	31.01	-7.55	9052	B0.5II+B0.5II	6.00	30.90	-7.75					
7929	B2V	5.39	29.91	-7.47	8402	B7IVe	4.69	29.33	-6.98	9063	B9III-IV	6.47	29.59	-6.30					
7933	B8.5V	5.50	29.63	-6.10	8403	B5III	5.78	30.04	-6.84	9068	B6IVe	6.52	30.24	-6.26					
7940	B2III	6.32	30.23	-7.59	8404	B9.5V	5.80	29.37	-6.10	9070	B4Ven	6.54	30.11	-6.58					
7961	B7IIIp	5.86	29.93	-6.53	8408	B4IVne	5.96	30.35	-6.55	9071	B1V	4.88	29.95	-7.89					
7963	B5Ve	4.53	29.28	-7.26	8419	B9Vn	5.70	29.15	-6.45	9076	B9IV	4.50	29.09	-6.70					
7977	B3Ia	4.84	31.03	-7.72	8425	B7IV	1.74	28.37	-7.94	9080	B9pSiEu	6.38	29.52	-6.07					