

The Wolf-Rayet binaries of the nitrogen sequence in the Large Magellanic Cloud

Spectroscopy, orbital analysis, formation, and evolution (Corrigendum)

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The mass-loss rates \dot{M} provided for the Wolf-Rayet (WR) stars in Table 2 in the original paper were derived from the transformed radii R_t . While R_t is correctly defined in the paper (Eq. (2)), an incorrect exponent was implemented in the script used to calculate them ($3/2$ instead of $2/3$). As a consequence, the \dot{M} values, Fig. 22, and the coefficients given in Table 5 in the original paper for the \dot{M} relations (Eq. (6)) are impacted. Tables 1 and 2 in this corrigendum list the revised values, and Fig. 1 shows the revised version of Fig. 22 in the original paper. Moreover, a typo pertaining to the R_t value of BAT99 119 is corrected.

Since the WR population studied here comprises a small fraction of the sample used to derive the mass-luminosity relation, the impact on the derived coefficients is limited, with changes smaller than the respective 1σ errors (cf. Table 5 in the original paper and Table 2 in this corrigendum). Moreover, these measurements have no impact on our main conclusions.

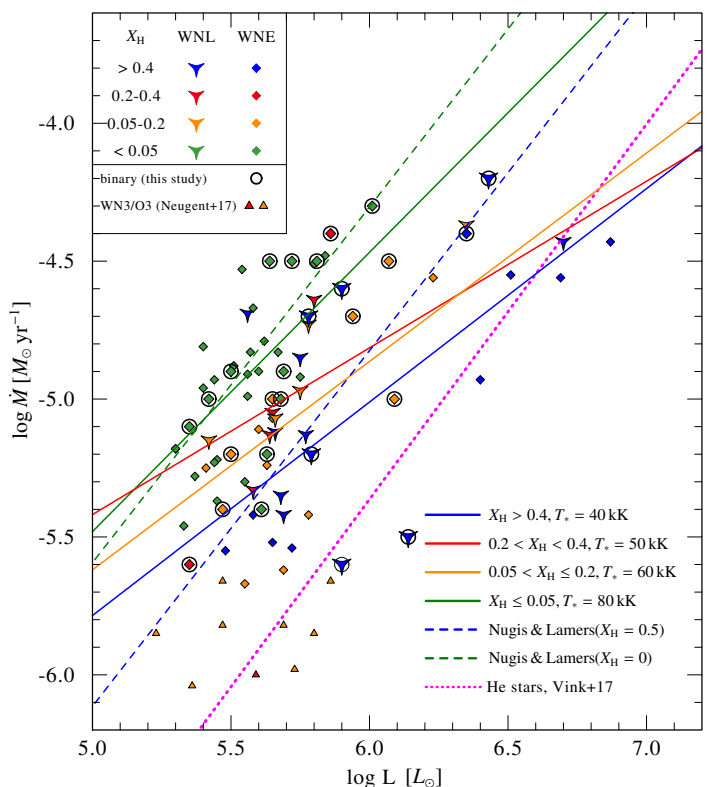


Fig. 1. Revised version of Fig. 22 from the original paper with updated mass-loss rates.

Table 1. Revised mass-loss rates for LMC WR binaries.

BAT99	$\log R_t [R_\odot]$	$\log \dot{M} [M_\odot \text{yr}^{-1}]$
006	1.80	-5.6
	-	≤ -8.5
014	0.50	-4.9
	-	-7.7
017	0.40	-4.5
	-	-8.0
019	0.30	-4.5
	-	-6.0
021	0.80	-5.0
	-	-
027	0.70	-4.7
	-	-6.0
029	0.70	-5.0
	-	-
032	0.80	-4.5
	1.10	-5.0
042	0.75	-4.4
	-	-5.5
043	0.70	-4.9
	-	> -8.0
049	0.80	-5.6
	-	-7.0
059	0.80	-5.2
	-	> -7.0
060	0.90	-5.4
	-	-
064	0.45	-5.0
	-	-
071	0.50	-5.1
	-	-
072	0.90	-5.5
	-	-
077	1.30	-5.2
	-	-
079	1.00	-4.6
	-	-
080	1.30	-5.2
	-	-
092	0.50	-4.3
	-	-5.1
095	0.90	-4.5
	0.9	-4.2
103	1.30	-5.0
	-	-
107	1.80	-5.2
	1.80	-5.3
113	1.80	-5.5
	-	-
116	1.10	-4.2
	1.50	-4.9
119	1.05	-4.4
	1.50	-4.2
126	0.60	-4.7
	-	-
129	0.80	-5.4
	-	-

Table 2. Coefficients for the $\log \dot{M}$ prescription (cf. Table 5 and Eq. (6) in the original paper).

Subtype	N	C_1	C_2	C_3	C_4	C_5	σ
All	183	-6.22	0.74 ± 0.07	-0.21 ± 0.16	1.42 ± 0.20	0.83 ± 0.09	0.28
$X_H \geq 0.4$	42	-6.50	0.79 ± 0.10	-0.37 ± 0.39	-	0.68 ± 0.19	0.25
$0.2 < X_H < 0.4$	32	-4.02	0.60 ± 0.17	-0.74 ± 0.40	-	0.43 ± 0.20	0.30
$0.05 < X_H \leq 0.2$	43	-3.84	0.76 ± 0.16	-0.78 ± 0.39	-	0.81 ± 0.24	0.30
$X_H \leq 0.05$	66	-8.13	1.01 ± 0.19	-0.06 ± 0.28	-	0.95 ± 0.19	0.26