A&A, 707, C1 (2026)
https://doi.org/10.1051/0004-6361/202659227e

Astronomy & Astrophysics

X-Shooting ULLYSES: Massive stars at low metallicity

XIII. Testing the bi-stability jump in the Large Magellanic Cloud *(Corrigendum)*

T. Alkousa[1,⋆], P. A. Crowther[1], J. M. Bestenlehner[1,2], H. Sana[3], F. Tramper[4], J. S. Vink[5], D. Pauli[3], J. Th. van Loon[6], F. Najarro[4], R. Kuiper[7], A. A. C. Sander[8], M. Bernini-Peron[8], and The XShootU collaboration

[1] Astrophysics Research Cluster, School of Mathematical and Physical Sciences, University of Sheffield, Hicks Building, Hounsfield Road, Sheffield S3 7RH, UK
[2] School of Chemical, Materials and Biological Engineering, University of Sheffield, Sir Robert Hadfield Building, Mappin Street, Sheffield S1 3JD, UK
[3] Institute of Astronomy, KU Leuven, Celestijnenlaan 200D, 3001, Leuven, Belgium
[4] Departamento de Astrofísica, Centro de Astrobiología, (CSIC-INTA), Ctra. Torrejón a Ajalvir, km 4, 28850 Torrejón de Ardoz, Madrid, Spain
[5] Armagh Observatory and Planetarium, College Hill, Armagh BT61 9DG, UK
[6] Lennard-Jones Laboratories, Keele University, ST5 5BG, UK
[7] Faculty of Physics, University of Duisburg-Essen, Lotharstraße 1, 47057 Duisburg, Germany
[8] Zentrum für Astronomie der Universität Heidelberg, Astronomisches Rechen-Institut, Mönchhofstr. 12-14, 69120 Heidelberg, Germany

A&A, 699, A314 (2025), https://doi.org/10.1051/0004-6361/202553799

Key words. techniques: spectroscopic – stars: massive – stars: mass-loss – supergiants – stars: winds, outflows – errata, addenda

Table 1. Correction to Table A.1 of the original publication.

Sk –	…	…	Γ_e^{spec}	…	Γ_e^{evo}
66° 171	…	…	0.36 ± 0.08	…	$0.37^{+0.1}_{-0.03}$
68° 155	…	…	0.36 ± 0.08	…	$0.35^{+0.1}_{-0.05}$
69° 279	…	…	0.45 ± 0.12	…	$0.35^{+0.09}_{-0.03}$
71° 41	…	…	0.35 ± 0.07	…	$0.29^{+0.05}_{-0.02}$
68° 135	…	…	0.48 ± 0.12	…	$0.60^{+0.17}_{-0.06}$
67° 5	…	…	0.38 ± 0.09	…	$0.47^{+0.08}_{-0.05}$
68° 52	…	…	0.41 ± 0.10	…	$0.42^{+0.07}_{-0.06}$
69° 43	…	…	0.31 ± 0.07	…	$0.31^{+0.04}_{-0.03}$
68° 140	…	…	0.33 ± 0.08	…	$0.29^{+0.04}_{-0.03}$
67° 2	…	…	0.36 ± 0.10	…	$0.38^{+0.07}_{-0.03}$
67° 14	…	…	0.38 ± 0.09	…	$0.27^{+0.02}_{-0.03}$
69° 52	…	…	0.36 ± 0.09	…	$0.27^{+0.04}_{-0.02}$
67° 78	…	…	0.29 ± 0.08	…	$0.27^{+0.03}_{-0.04}$
70° 16	…	…	0.18 ± 0.04	…	$0.12^{+0.01}_{-0.01}$
68° 8	…	…	0.37 ± 0.11	…	$0.31^{+0.06}_{-0.06}$
67° 195	…	…	0.12 ± 0.03	…	$0.08^{+0.01}_{-0.01}$

Table 2. Correction to Table 3 of the original publication.

Target Sk –	…	$v_{esc,(1-\Gamma_e)}$ km s^{-1}	…
66° 171	…	537	…
68° 155	…	524	…
69° 279	…	467	…
71° 41	…	548	…
68° 135	…	440	…
67° 5	…	460	…
68° 52	…	488	…
69° 43	…	440	…
68° 140	…	456	…
67° 2	…	355	…
67° 14	…	390	…
69° 52	…	352	…
67° 78	…	311	…
70° 16	…	366	…
68° 8	…	253	…
67° 195	…	269	…

In the original publication, the spectroscopic and evolutionary Eddington parameters were derived using the spectroscopic Γ_e^{spec} and evolutionary Γ_e^{evo} masses, respectively. The values presented in Table A.1 were incorrect. All the values should be divided by a factor of two. This correction affects Fig. 12 (mass-loss rates $\log \dot{M}$ vs. Γ_e), Fig. 19 (wind efficiency parameter η vs. effective temperature T_{eff}), Fig. 20 (ratio of the terminal wind velocity v_∞ to the escape velocity v_{esc} vs. T_{eff}), and Eq. (8) in the original paper. We present the correct Γ_e^{spec} and Γ_e^{evo} in Table 1 and the correct $v_{esc,(1-\Gamma_e)}$ in Table 2.

⋆ Corresponding author: Talkousa1@sheffield.ac.uk

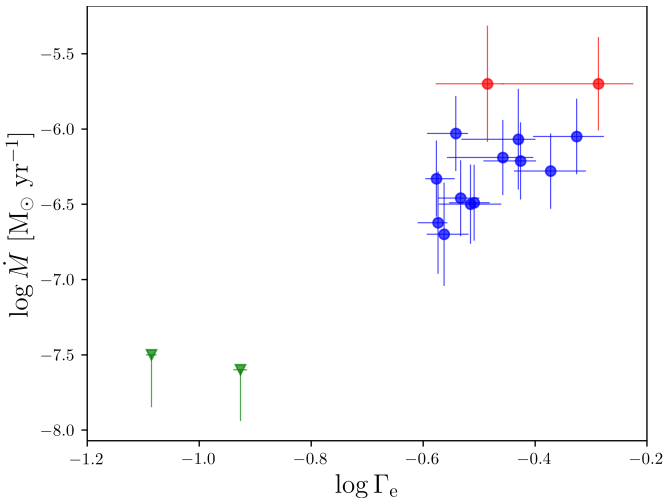

Fig. 1. Replacement of Fig. 12 of the original paper.

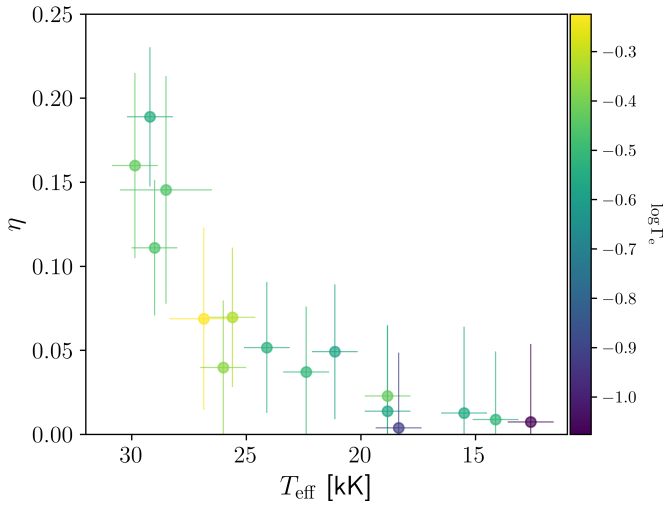

Fig. 2. Replacement of Fig. 19 of the original paper.

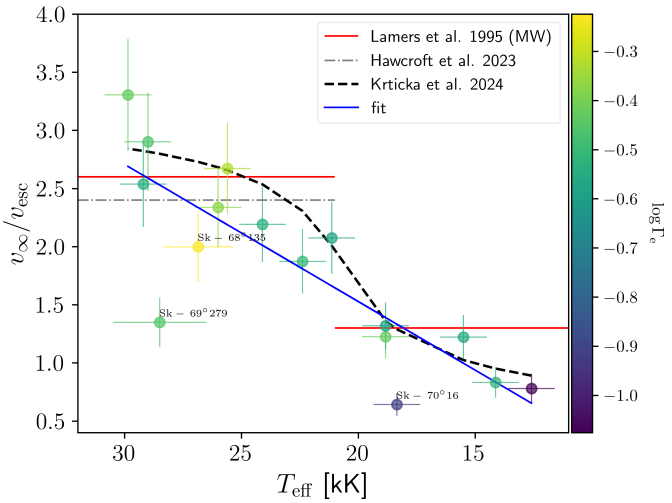

Fig. 3. Replacement of Fig. 20 of the original paper.

Following these corrections to the parameters, some errors in the plots had to be corrected. Figure 12 of the original publication is replaced by Fig. 1, where the values of $\log \Gamma_e$ for the sample have been shifted leftward by −0.3 dex. Figures 19 and 20 in the original are replaced by Figs. 2 and 3, respectively. The colorbar labels in the original plots are shifted by −0.3 dex.

Equation (8) in the original is replaced by the following equation:

$$v_\infty/v_{\rm esc} = 5.6(\pm1.0)\log(T_{\rm eff}/{\rm K}) - 22.3(\pm4.5). \quad (1)$$

This correction also eliminates the issue with the abnormally high $\Gamma_e^{\rm spec}$ and $\Gamma_e^{\rm evo}$ we obtained for our sample and the $\Gamma_e^{\rm evo} > 1$ we obtained for the hyper-giant Sk −68° 135, which was discussed in Sect. 4.3 of the original publication. It also brings our derived values more in line with the numerically predicted $v_\infty/v_{\rm esc}$ from Krticka et al. (2024). These adjustments do not change the conclusions originally drawn from the study.