

Erratum

The VLT-FLAMES survey of massive stars: atmospheric parameters and rotational velocity distributions for B-type stars in the Magellanic Clouds

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ABSTRACT

We correct the estimates of the dispersions in the rotational velocities for early-type stars in our Galaxy (Dufton et al. 2006, A&A, 457, 265) and the Magellanic Clouds (Hunter et al. 2008, A&A, 479, 541). The corrected values are $\pi^{\frac{1}{4}}$ (i.e. approximately 33%) larger than those published in the original papers.

Key words. stars: early-type – stars: fundamental parameters – stars: rotation – stars: evolution – errata, addenda

In two recent papers, we have estimated projected rotational velocities for samples of early-type stars in our Galaxy (Dufton et al. 2006) and in the Small and Large Magellanic Clouds (Hunter et al. 2008). These observed values were used to deduce the underlying distribution of rotational velocities assuming that they followed a Gaussian distribution, viz.

$$f(v)dv \propto \exp\left(-\left(\frac{v-v_0}{\Delta v}\right)^2\right)dv$$

where $f(v)dv$ is the fraction of stars with a velocity of v and in a range of velocities, dv .

The values quoted for the most likely velocity, v_0 , were correct but those for the velocity dispersions, Δv , should be increased by a factor of $\pi^{\frac{1}{4}}$ (i.e. by approximately 33%). The original values for v_0 and the corrected values for Δv are listed in Table 1. Also listed are the standard deviations, σ , for a normal distribution given by:

$$f(v)dv \propto \exp\left(-\frac{1}{2}\left(\frac{v-v_0}{\sigma}\right)^2\right)dv.$$

Table 1. Mean rotational velocities and corrected dispersions for the different FLAMES samples.

Sample	v_0 km s ⁻¹	Δv km s ⁻¹	σ km s ⁻¹
Galaxy	225	145	105
LMC	100	200	145
SMC	175	200	145

Note that Δv and σ are related by a factor of the square root of two. As in the original papers, all values have been rounded to the nearest 5 km s⁻¹.

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References

Dufton, P. L., Smartt, S. J., Lee, J. K., et al. 2006, A&A, 457, 265
Hunter, I., Dufton, P. L., Smartt, S. J., et al. 2008, A&A, 479, 541