

Correction to: The metal-poor dwarf irregular galaxy candidate next to Mrk 1172

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This is a correction to the paper entitled ‘The metal-poor dwarf irregular galaxy candidate next to Mrk 1172’ that was published in Monthly Notices of the Royal Astronomical Society Volume 506, September 2021, pages 3527–3539, 10.1093/mnras/stab1838.

Some of the values reported for the dwarf galaxy in Table 1 are incorrect, in special the systemic velocity v_s . We have noticed that we fitted the analytical model to the dwarf velocity field adopting the rest-frame of the Early-type galaxy instead, causing an underestimation of v_s . The velocity fields used in the fit in fig. 11 are correct though. We performed the fit again and the correct values are listed in Table 1. In this sense, the paragraph in page 3536 about the possible separation of the targets:

‘Analysing the available redshift for Mrk 1172 (which is consistent with our determination) and our measurement for the dIGal, one can calculate a distance of approximately 4 Mpc between both galaxies, for which gravitational interactions could be neglected. However, this calculation does not take into account that the shift in the emission lines of the dIGal could be also caused by its motion in relation to Mrk 1172. Considering that Mrk 1172 has a massive halo, it is possible that this halo is populated by faint dwarf galaxies. In this case, the participation of the dIGal in this group of galaxies should not be discarded, and the estimate of 4 Mpc of distance between both galaxies could be incorrect. As an exercise, if we assume 300 km s^{-1} for the group velocity, for example, it would affect the above mentioned distance estimate by approximately 3 Mpc, i.e. the uncertainty in the distance estimate due to the relative motion of the dwarf galaxy is large.’

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Table 1. Corrected values for the fitting of the rotation model for both galaxies.

	Mrk 1172	the dIGal
v_s (km s^{-1})	12373 ± 5	12071 ± 3
A (km s^{-1})	720 ± 180	220 ± 97
i ($^\circ$)	30 ± 9	27 ± 10
C_0 (arcsec)	4.8 ± 0.5	7.0 ± 1.1
Ψ_0 ($^\circ$)	167 ± 4	165 ± 4
p	1.5	1.5

Should be read as follows:

Analysing the available redshift for Mrk 1172 (which is consistent with our determination) and our measurement for the dIGal, one can calculate a line-of-sight separation velocity of 270 km s^{-1} . This value is in agreement with values expected for interacting systems with the masses of our galaxies (Stierwalt et al. 2015).

This does not affect our conclusions, but actually reinforce the scenario of interaction between both galaxies.

REFERENCE

Stierwalt S., Besla G., Patton D., Johnson K., Kallivayalil N., Putman M., Privon G., Ross G., 2015, *ApJ*, 805, 2

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