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Mass, velocity anisotropy, and pseudo phase-space density profiles of Abell 2142 *(Corrigendum)*

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The pseudo phase-space density profile of Abell 2142, defined with the galaxy number density profile ν instead of the cluster mass density profile ρ, was shown in Fig. 12 of Munari et al. (2014). This graph was erroneous (because we had incorrectly considered the projected number density profile instead of the 3D profile). The correct figure is shown below. The values in Table 4 are changed, and the correct ones are reported in the table below.

While Fig. 12 of Munari et al. (2014) indicated that the PPSDs computed with the number density profile are significantly shallower than the theoretical relation of Dehnen & McLaughlin (2005), the corrected version of the figure shown here indicates that the PPSDs computed with the number density profile are now either consistent with the relation of Dehnen & McLaughlin ($Q(r)$ for BLUE sample) or only slightly shallower, but not less consistent with that relation than found for the PPSDs computed with the mass density profile.

Therefore, the statement in Munari et al. (2014) that the mass density profile represents the PPSD and $\beta - \gamma$ relations better is no longer correct. Indeed, Figs. 11 and 13 of Munari et al. show that the $\beta - \gamma$ relations obtained using the mass density or tracer number density are indistinguishable for the RED and ALL samples. And therefore, the entire discussion of the greater relevance of the mass density profile relative to the galaxy number density profile must be dismissed.

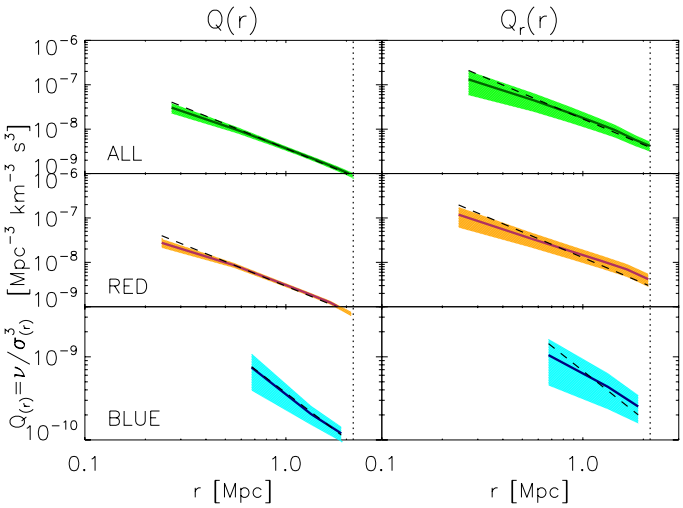

Fig. 12. Same as Fig. 10 of Munari et al. (2014), but now using the radial profiles of galaxy number density instead of total mass density to estimate the PPSD.

References

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Munari, E., Biviano, A., & Mamon, G. A. 2014, A&A, 566, A68

Table 4. Best-fit parameters of the PPSD profile.

	$Q(r)$		$Q_r(r)$	
	A $[M_\odot\ \mathrm{Mpc}^{-3}\ \mathrm{km}^{-3}\ \mathrm{s}^3]$	B	A $[M_\odot\ \mathrm{Mpc}^{-3}\ \mathrm{km}^{-3}\ \mathrm{s}^3]$	B
Fixed slope				
ALL	5534 ± 314	−1.84	25 071 ± 3341	−1.92
RED	7727 ± 391	−1.84	38 484 ± 5622	−1.92
BLUE	1753 ± 294	−1.84	3998 ± 1084	−1.92
Free slope				
ALL	6342 ± 367	−2.28 ± 0.11	29 175 ± 4223	−2.27 ± 0.24
RED	8034 ± 411	−2.00 ± 0.09	38 881 ± 5665	−1.77 ± 0.23
BLUE	3121 ± 793	−2.97 ± 0.50	5413 ± 1810	−2.60 ± 0.67
	$Q(r)$ GAL		$Q_r(r)$ GAL	
	A $[10^{-9}\ \mathrm{Mpc}^{-3}\ \mathrm{km}^{-3}\ \mathrm{s}^3]$	B	A $[10^{-9}\ \mathrm{Mpc}^{-3}\ \mathrm{km}^{-3}\ \mathrm{s}^3]$	B
Fixed slope				
ALL	3.7 ± 0.18	−1.84	17. ± 2.2	−1.92
RED	2.9 ± 0.14	−1.84	13. ± 1.9	−1.92
BLUE	0.37 ± 0.056	−1.84	0.68 ± 0.18	−1.92
Free slope				
ALL	3.6 ± 0.86	−1.72 ± 0.10	17. ± 2.4	−1.72 ± 0.23
RED	2.9 ± 0.59	−1.75 ± 0.09	14. ± 2.0	−1.52 ± 0.23
BLUE	0.36 ± 0.39	−1.74 ± 0.48	0.62 ± 0.21	−1.39 ± 0.66

Notes. The PPSD profile is parametrized as $Q(r) = A\, r^B$. The first panel at the top shows the results of the fit of $Q(r)$ and $Q_r(r)$ for the different samples, both when keeping the exponent fixed to the values suggested by Dehnen & McLaughlin (2005), and when considering the exponent as a free parameter. In the bottom panel (the one identified by $Q(r)$ GAL and $Q_r(r)$ GAL) the same quantities are shown, but they refer to the PPSD computed using the galaxy number density profile instead of the total matter density profile.