

Erratum: "A 3D Voronoi+Gapper Galaxy Cluster Finder in Redshift Space to $z \sim 0.2$. II. An Abundant Cluster Population Dominated by Late-type Galaxies Unveiled" (2018, ApJ, 869, 145)

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In the published article, two errors were incurred in the conversion to virial masses (M_{Virial}) of the line-of-sight (LOS) velocity dispersions (σ_{cz}) through Equation (2) by Biviano et al. (2006) for the clusters in our low-z statistical subset (z = 0.04-0.09). The most significant one arose from considering σ_v in that equation to be the LOS velocity dispersion of a cluster instead of its spatial velocity dispersion. The LOS velocity dispersions are typically $\sqrt{3}$ times lower than the spatial ones; thus, the calculated virial masses underestimate the actual masses by a factor of $3^{3/2}$. Concerning the second one, it stemmed from using an equation valid for z = 0 clusters instead of a redshift-dependent velocity dispersion-mass relation.

Corrected cluster virial masses are computed through the use of Equation (1) by Munari et al. (2013):

$$\frac{\sigma_{\rm cz}}{\rm km \ s^{-1}} = A_{\rm 1D} \left[\frac{h(z) M_{200}}{10^{15} M_{\odot}} \right]^{\alpha},\tag{1}$$

where σ_{cz} is the LOS velocity dispersion, α and A_{1D} are provided parameters coming from cluster simulations, and h(z) is the evolution factor in $H(z) = H_0 h(z)$. H_0 is the Hubble constant.



Figure 29. With updated masses. Histograms showing the distributions of the logarithm of virial masses for the VoML+G statistical subset of clusters ($N_g \ge 10$ within z = 0.04-0.09 separated into late-type-poor (in red) and late-type-rich (in blue). Both distributions span the same mass range.

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Therefore, the cluster virial masses for our subsample were recalculated using Equation (1) in Munari et al. (2013), with $M_{\text{Virial}} = M_{200}$. We adopt values of $A_{1D} = 1090$ and $\alpha = 0.333$ that provide a good approximation to Equation (2) of Biviano et al. (2006). The corrected mean value for the logarithm of the virial masses (in units of M_{\odot}) for the late-type-poor clusters is 13.431 ± 0.005 and, correspondingly, for the late-type-rich clusters is 13.42 ± 0.01. Consequently, these new values should replace the ones given in the published article. Specifically, in the fourth sentence of the abstract and in the fifth sentence of the last paragraph of Section 8.3 as well as in the starting sentence of the fifth paragraph of the conclusions (Section 10). Also the original Figure 29 consisting of the mass histograms for both cluster types is affected. We provide a revised Figure 29 here.

The significantly larger corrected mean virial masses for the late-type-poor and late-type-rich clusters, $\sim 4 \times 10^{13} M_{\odot}$, are both within the mass range normally attributed to clusters of galaxies.

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