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A new fitting-function to describe the time evolution of a galaxy's gravitational potential
(Corrigendum)

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ABSTRACT

Key words. galaxies: evolution – dark matter – errata, addenda

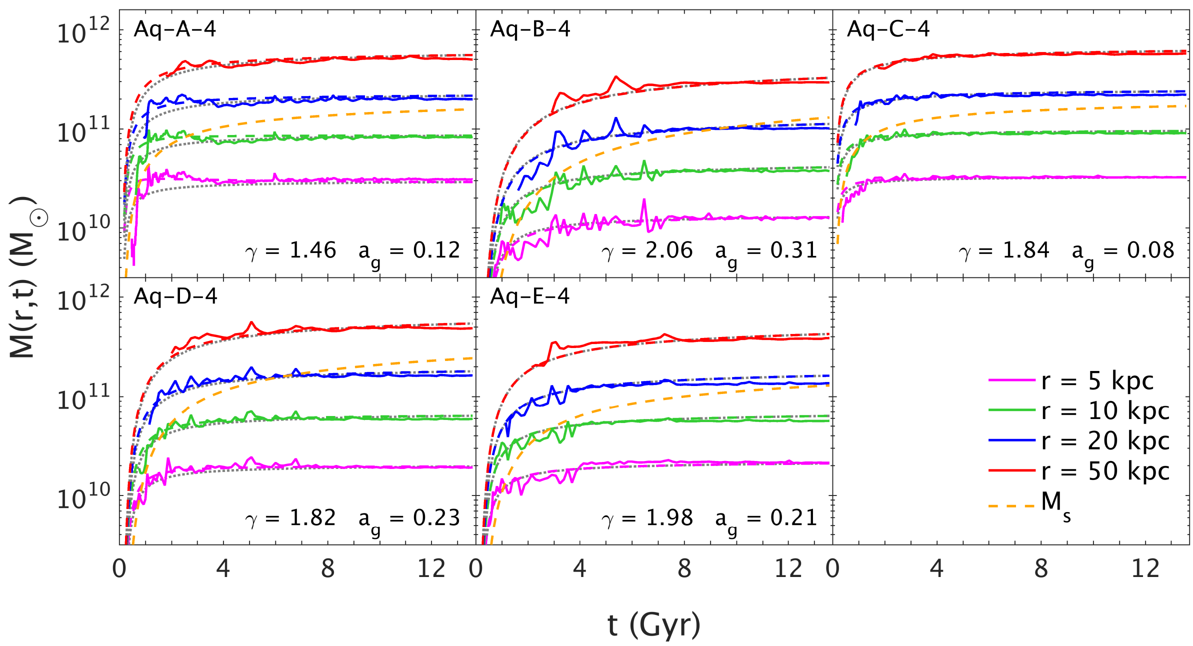

Fig. 1. Like Fig. 4 of Buist & Helmi (2014) but with the corrected values for the growth rate a_g.

The quoted values of the growth rate a_g for the Aquarius haloes in Fig. 4 of Buist & Helmi (2014) are too small by a factor $\log(10) \approx 2$. This growth rate stems from fitting the evolution of the scale mass $M_s(t)$ and scale radius $r_s(t)$ with a model where they grow as an exponential in redshift z

$$M_s(z) \propto \exp\left\{-2a_g z\right\}, \quad (1)$$

$$r_s(z) \propto \exp\left\{-2\left(a_g/\gamma\right)z\right\}, \quad (2)$$

such that $M_s(t)$ and $r_s(t)$ are related by a power law with coefficient γ. The quoted values of γ in the figure are correct. The curves shown in the figure are not affected, nor are any other figures in the article. A corrected version of Fig. 4 is shown in Fig. 1.

In the discussion of the results from the Milky-Way like Aquarius dark matter haloes we mentioned that the similarly defined growth rate a_c of $M_{vir}(t)$ (see Wechsler et al. 2002) was in the range 0.1 to 0.2 for these haloes, which was below the 68% scatter of the median given by Wechsler et al. in their Fig. 8. With the correction above, we now find a_c in the range ≈0.2 to 0.4, which is still mostly below the median but within the 68% scatter.

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References

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