Monthly Notices
of the
ROYAL ASTRONOMICAL SOCIETY

Mon. Not. R. Astron. Soc. **418,** 2815 (2011) doi:10.1111/j.1365-2966.2011.20056.x

Erratum: Dynamical masses of early-type galaxies: a comparison to lensing results and implications for the stellar initial mass function and the distribution of dark matter

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Key words: errata, addenda – galaxies: elliptical and lenticular, cD – galaxies: kinematics and dynamics – galaxies: structure.

The paper 'Dynamical masses of early-type galaxies: a comparison to lensing results and implications for the stellar initial mass function and the distribution of dark matter' was published in Mon. Not. R. Astron. Soc. **415**, 545–562 (2011). A corrected version of fig. 5 of that paper is given here along with affected statements in the text.

In fig. 5 of Thomas et al. (2011) we compared projected masses of Coma galaxies obtained (1) from dynamical models with explicit dark matter haloes (top row) and (2) from dynamical models in which all the mass follows the light (bottom row) with gravitational lenses from the SLACS survey (Auger et al. 2009). The Coma galaxies' mass estimates without dark matter (*open circles* in the *bottom* panels) were inadvertently raised by 0.19 dex. Fig. 1 shows the correct values. The Coma galaxies' masses of our fiducial models with dark matter, shown in the upper panels, were correct in the original paper version and we repeat the upper panels for the sake of completeness.

Neglecting outer dark matter in dynamical models where all the mass is assumed to follow the light leads to a mass deficit. Therefore, the masses obtained from these models fall below those of measured strong gravitational lenses. The effect becomes noticeable at larger radii where the luminous mass is less important. This can be seen in the bottom panels of Fig. 1: the left-hand panel is for lenses which have an Einstein radius $r_{\rm Ein} \approx 0.5\,r_{\rm eff}$ whereas the right-hand panel is for lenses with $r_{\rm Ein} \approx 0.75\,r_{\rm eff}$. At $0.5\,r_{\rm eff}$ projected masses of dynamical models without dark matter are still consistent with the lenses, while at $0.75\,r_{\rm eff}$ the mass deficit in the outer parts becomes apparent. Dynamical models with dark matter (upper panels) are consistent with gravitational lens masses at all radii.

Consequently, the description of the bottom panels in fig. 5 of Thomas et al. (2011), last paragraph of Section 3.2, 'The bottom row of Fig. 5 [...] than in the lower right-hand one.' is incorrect, while the conclusion drawn from the comparison – that dynamical models in which all the mass follows the light are inconsistent with strong gravitational lensing results – remains correct.

In addition, two statements in the Summary (Section 7) are incorrect: '(i) For galaxies with low velocity dispersions ($\sigma_{\rm eff} \approx 200\,{\rm km\,s^{-1}}$), the assumption that all the mass follows the light yields projected masses larger than in comparable strong gravitational lens systems.' and '(ii) In high-velocity-dispersion galaxies ($\sigma_{\rm eff} \approx 300\,{\rm km\,s^{-1}}$), the assumption that mass follows light is consistent with strong lensing results.' Instead, the discrepancy shows up as a mass deficit and does not depend on the galaxy velocity dispersion $\sigma_{\rm eff}$.

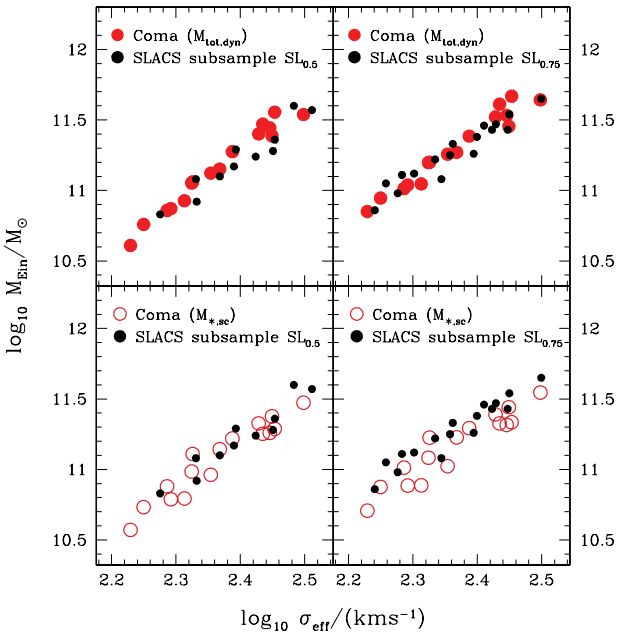

Figure 1. Corrected version of fig. 5 from Thomas et al. (2011). Top panels (as in the original paper): the projected total (luminous+dark) mass $M_{\rm Ein}$ within a fiducial Einstein radius $r_{\rm Ein}$ from two-component dynamical models with dark matter haloes. Coma galaxies are indicated by the large symbols, while the small circles are SLACS gravitational lenses (Auger et al. 2009). Bottom panels: similar projected mass, but from dynamical models in which all the mass follows the light. In the left-hand panels the comparison is made at $r_{\rm Ein} \approx 0.5\,r_{\rm eff}$, while in the right-hand panels at $r_{\rm Ein} \approx 0.75\,r_{\rm eff}$ (details in Thomas et al. 2011). In the original version of the paper the Coma galaxies' masses in the *bottom* panels (open circles) were erroneously raised by 0.19 dex.

We note that in the rest of the paper we only discuss the properties of our fiducial dynamical models with dark matter and the conclusions are unaffected by this mistake.

REFERENCES

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