

What Drives Stellar Population Evolution?

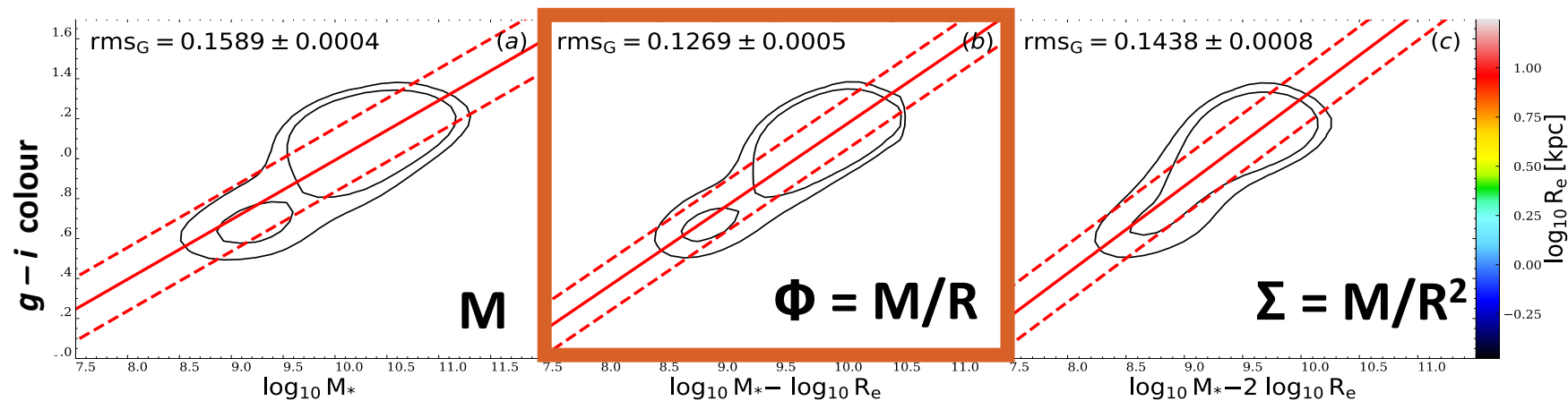
Barone et al. 2018: Gravitational Potential and Surface Density

Colour ~ Potential
M/R

Metallicity ~ Potential
M/R

Age ~ Surface Density
M/R²

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The two peaks in the distribution, corresponding to the red sequence and the blue cloud, are better aligned for $g-i$ colour- Φ , and show the least residual trend with radius (indicated by the colour-map).

The colour- Φ diagram is a more precise tool for determining the developmental stage of the stellar population, rather than the conventional colour-mass diagram.