



Galaxy And Mass Assembly (GAMA): the red fraction and radial distribution of satellite galaxies

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We investigate the properties of satellite galaxies that surround isolated hosts within the redshift range $0.01 < z < 0.15$, using data taken as part of the Galaxy And Mass Assembly survey. Making use of isolation and satellite criteria that take into account stellar mass estimates, we find 3514 isolated galaxies of which 1426 host a total of 2998 satellites. Separating the red and blue populations of satellites and hosts, using colour-mass diagrams, we investigate the radial distribution of satellite galaxies and determine how the red fraction of satellites varies as a function of satellite mass, host mass and the projected distance from their host. Comparing the red fraction of satellites to a control sample of small neighbours at greater projected radii, we show that the increase in red fraction is primarily a function of host mass. The satellite red fraction is about 0.2 higher than the control sample for hosts with $11.0 < \log M_* < 11.5$, while the red fractions show no difference for hosts with $10.0 < \log M_* < 10.5$. For the satellites of more massive hosts the red fraction also increases as a function of decreasing projected distance. Our results suggest that the likely main mechanism for the quenching of star formation in satellites hosted by isolated galaxies is strangulation.

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