

Galaxies driven only by secular evolution?

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Abstract. The AMIGA project (Analysis of the interstellar Medium of Isolated Galaxies, <http://amiga.iaa.es>) has identified a significant sample of very isolated (T_{cc} (nearest-neighbor) ≈ 2 -3 Gyr) galaxies in the local Universe and revealed that they have different properties than galaxies in richer environments. Our analysis of a multiwavelength database includes quantification of degree of isolation, morphologies, as well as FIR and radio line/continuum properties.

Properties usually regarded as susceptible to interaction enhancement show lower averages in AMIGA—lower than any galaxy sample yet identified. We find lower MIR/FIR measures (Lisenfeld *et al.* 2007), low levels of radio continuum emission (Leon *et al.* 2008), no radioexcess above the radioFIR correlation (0%, Sabater *et al.* 2008), a small number of AGN (22%, Sabater *et al.* 2012), and lower molecular gas content (Lisenfeld *et al.* 2011). The late-type spiral majority in our sample show very small bulge/total ratios (largely < 0.1) and Sersic indices consistent with an absence of classical bulges (Durbala *et al.* 2008). They show redder $g - r$ colors and lower color dispersion for AMIGA subtypes (Fernandez-Lorenzo *et al.* 2012) and show the narrowest (gaussian) distribution of HI profile asymmetries of any sample yet studied.

This work has been supported by Grant AYA2011-30491-C02-01 co-financed by MICINN and FEDER funds, and the Junta de Andalucía (Spain) grants P08-FQM-4205 and TIC-114.

References

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