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Effects of the environment in nuclear activity

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Abstract

The aim of the work presented in this poster is the study the effects of the environment on nuclear activity, one of the mechanisms driving galactic evolution for which the effect of the environment is still poorly understood. The study was developed within the frame of the AMIGA project which provides a well-defined control sample of isolated galaxies. We performed a search in the literature and chose three methods to select AGN candidates: a) Radio-excess above the well known radio to far-infrared (FIR) correlation in order to find radio AGN. We improved the results using VLA finding 0% of radio AGN. b) FIR colours as a diagnostic for obscured AGN candidates. c) Analysis of optical spectra of isolated galaxies from the Sloan Digital Sky Survey (SDSS) obtaining their stellar populations, nebular emission and nuclear activity classification (Sabater et al. 2008, A&A 486, 73; Sabater 2009, PhD thesis). We also compared with samples in denser environments and concluded that the environment plays a crucial role in the triggering of radio nuclear activity. The sample of isolated galaxies showed a very low rate of AGN, making it the most quiescent sample built so far. Electronic version of the poster at http://www.iaa.es/∼jsm/SEA2010.

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