

Título/Title:

Multi-wavelengths analysis of low luminosity galaxies behind the Virgo cluster

Orientador/Supervisor:

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Descrição/Description:

Star formation is a fundamental tool to investigate galaxy evolution across the Hubble time. Recent observations have shown that local starburst systems have star formation efficiencies equivalent to the sub-millimeter galaxies at higher redshift. A similar relation is seen between high redshift LIRGs and ULIRGs that are equivalent to local spiral disks. This implies that despite their activity, in the last 7 Gyr galaxies decreased their star formation rate by at least one order of magnitude. In this project the student will investigate the properties of a sample of low redshift Luminous InfraRed Galaxies (LIRG) selected at 250 micron from the Herschel Virgo Cluster Survey.

The student will use for the analysis the statistical method of MAGPHYS, which interprets the Spectral Energy Distribution (SED) of a galaxy in terms of its reproducibility as a combination of different simple stellar population libraries. With this data the student will characterize better the low luminosity objects that are behind the Virgo cluster, shedding light to the mechanism that reduce the star formation process between $z = 1$ and $z = 0$ in such galaxies. At the same time this investigation will also explain in which measure the quenching of the star formation in the last billion years is a fast process or more a secular process related to the internal mechanism influencing their life.