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Physical properties of dwarf star-forming galaxies at intermediate redshifts (Jesus Gallego)

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Dwarfs are the most common galaxies and play a significant role in galaxy evolution. However, they are objects still poorly understood. Although most of these systems present an old stellar population, disagreements remain about the period of their dominant star-formation activity.

Our objective is to investigate the dwarf galaxy population in building and acquiring samples of star-forming systems selected by mass. This selection implies to select from a catalog including a lot of information, including multiband photometry, photometric redshifts and stellar masses.

We use a new approach in the near-infrared. It will shed some light on the early stellar mass assembly of dwarfs up to z=2 (where stellar populations are several Gyr less evolved). GTC/EMIR deep spectroscopy provides Halpha and [NII]6584 emission line fluxes and equivalent widths that will help us to characterise the strength of the current star formation process and gas-phase metallicity. We then combine the emission-line fluxes and equivalent widths with ancillary data to infer the star-formation histories from emission lines and spectral energy distribution fittings. This study will provide information about the stellar mass assembly of the sample and the corresponding redshift of formation for the targets, which are observational constraints to current galaxy evolution models.

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Track Classification: Galaxy Stellar Populations and star-formation histories