

The Spatially Resolved Star Formation and Extinction of Galaxies as Seen by Multiwavelength Observations

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Abstract

Star formation in galaxies is one of the most important aspects of galaxy evolution. Despite its importance, for example, the relation between gas density and star formation rate (SFR) or gas-to-dust mass ratio have not been clearly determined. In this work, we used spatially resolved datasets of galaxies taken from GALEX AIS and Herschel Reference Survey (HRS) with some other ancillary data and made a map of SFR density. Analyzing these data, we found a relation between the SFR density and the stellar mass density, and we compare the relation with some physical quantities. We also show the spatially resolved IRX and β relation for our sample galaxies.