

Denis Burgarella (*Laboratoire d'Astrophysique de Marseille*)

Dust from the Herschel FIR First Detections of Lyman Break Galaxies

Lyman Break Galaxies (LBGs) are selected by their UV color and they provided the astronomers with the first and (still) largest sample of high redshift galaxies. Their ultraviolet and optical properties are rather well constrained and they appear to be starburst galaxies. However, since the very beginning, one question was not satisfactorily addressed: what is their infrared luminosity or, in other words, how much dust attenuation is necessary to evaluate their total star formation rate (SFR) ? Spitzer and AKARI allowed us to start addressing this point but only at $z \sim 1$. Herschel is going one step further and we detected hundreds of LBGs at $z \sim 2$ and a few tens at $z > 3$ (some of them with spectroscopic redshift) in the COSMOS field. We will report on these detections and try to understand what they mean in terms of galaxy evolution and assess the possible links between LBGs and other types of high redshift galaxies by comparing their properties to other observed objects (e.g. LBGs, LAEs, ...) and to an evolutionary model that we built. I will also present CIGALE (<http://cigale.oamp.fr>) which is a model developed to fit Spectral Energy Distributions from the far-ultraviolet to the submm. CIGALE includes dust attenuation laws for two stellar populations.