X27a The ALPINE-ALMA [CII] survey: Dust attenuation properties and obscured star formation at z $\sim$ 4.4-5.8

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Over the past decades, several important steps have been taken to understand the formation and evolution of first generations of galaxies. Thanks to deep multi-wavelength observations by Hubble Space Telescope (HST), studies of early galaxies have now been pushed well into the Epoch of Reionization, i.e. up to z$\sim$10-11 only 500Myr after the Big Bang (e.g. Bouwens+15, Oesch+16, Atek+18). However, our current knowledge beyond z$\sim$2-3 is significantly biased to the rest-frame ultraviolet observations as it's only accessible by deep optical/near-infrared observations, and dust-obscured properties of high-redshift galaxies has remained mostly unknown. This situation was revolutionized by extremely sensitive and high-resolution far-infrared (FIR) interferometers such as ALMA and NOEMA. First ALMA observations showed us surprises by finding fainter FIR emission than expected from low-redshift galaxy observations, suggesting an evolution of dust-obscured galaxy properties at high-redshift (e.g. Capak+15, Bouwens+16). To understand this potential evolution with statistical sample and with wide range of galaxy parameters, large ALMA observations were required. In this talk, I will discuss the evolution of dust attenuation and dust-obscured star-formation of galaxies at z$\sim$3 to z$\sim$6 revealed by ALMA, including a recent ALMA large program: ALPINE.