Properties of galaxies with $2 < z < 6+$ as seen from the VIMOS Ultra-Deep Survey

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Abstract

I will present the general properties of galaxies at $2 < z < 6+$ as seen from the VIMOS Ultra Deep Survey (VUDS). VUDS is an ultra-deep spectroscopic survey of 10000 galaxies selected at $z > 2$ in the COSMOS, ECDFS, and VVDS-02h field covering a total of 1 deg^2, the largest to date. Spectra not only deliver accurate redshifts, but also spectral line and indices in the UV rest-frame, which are used to infer internal physical properties. The average spectral properties and their distribution are computed for the first time with a robust statistical basis up to redshift $z \simeq 6$, in relation to the strong evolution of the mass-SFR relation observed in VUDS. These properties are correlated with local environment, multi-wavelength and morphology properties. Inferences on the galaxy assembly scenario, and on the contribution of major physical processes like merging and accretion will be discussed.