

Lyman Continuum Signal from $z \sim 3$ star-forming galaxies and higher redshift implications

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Abstract

The Lyman Continuum (LyC) escaping galaxies is under investigation to understand the physical processes responsible of the re-ionization of the Universe. Current studies are unable to obtain unambiguous LyC detections, even from the faintest star-forming galaxies. One of the reasons is that, to increase the statistics, we usually try to combine star-forming galaxies with different physical properties. In this project we are measuring LyC signal from about 80 spectroscopically confirmed star-forming galaxies at $z \sim 3$, for which multi-wavelength photometry from CANDELS is available. We aim to take advantage of the spectral energy distribution fitting and to stack samples of galaxies with physical properties sensitive to LyC leakage. This stack can enhance the weak LyC signal, instead of dilute it within the average of a large sample of LyC emitters and not emitters. Also, the dedicated-stack results can teach us about the physical properties of the re-ionization sources.