

Probing the end of the reionization epoch with high redshift galaxies

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Abstract

The epoch of re-ionization is a fascinating time in the history of the Universe that is still largely unexplored. Lyman alpha emitting galaxies at high redshift offer a powerful probe of both reionization and of the early phases of galaxy formation. In particular the Lyman alpha emission is an efficient tool for identifying the very first galaxies and provides a robust test of the reionization epoch. I will review the most recent observational results on high redshift galaxies including those coming from our ongoing ESO Large Program and the constraints that we can place on the reionization epoch using the first statistical samples of spectroscopically confirmed $z=7$ Lyman break galaxies. I will also discuss how future spectroscopic surveys with the E-ELT of very high redshift Lyman break galaxies and Lyman alpha emitters will allow us to explore and characterize the reionization epoch in detail.