# The Grism Lens-Amplified Survey from Space (GLASS): Ly$\alpha$ emitters at the epoch of reionization

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## Abstract

The Grism Lens-Amplified Survey from Space (GLASS) is an ongoing HST slitless grism spectroscopy program. It will observe 10 massive clusters at $z \sim 0.5$ including the 6 Hubble Frontier Fields and 8 CLASH clusters. The final GLASS cluster was observed in January 2015. GLASS was designed to i) explore the gas and galaxies at the epoch of reionization, ii) assess how gas and metals cycle in and out of galaxies, and iii) investigate why galaxy evolution is dependent on environment. The former two take advantage of the lensing magnification of the foreground clusters to reach fainter luminosities and higher spatial resolution than would be possible in blank field observations. The GLASS data contain deep near-infrared (0.8-1.7$\mu m$) spatially resolved spectroscopy of roughly 20000 objects at low, intermediate and high redshift, ideal for addressing i)–iii). We will present the first preliminary results from the completed GLASS survey. In particular, we will present the GLASS spectroscopy of hundreds of photometrically selected galaxies at $z > 6$ behind the observed clusters. For several of these sources Ly$\alpha$ has been detected in the GLASS spectra. We will show how this spectroscopic sample can be used to explore the epoch of reionization, and in particular, how it can be used to determine for the first time whether the reionization is 'patchy' or 'smooth' at $z > 7$.