



Constraining the history of reionization with quasar absorption lines

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The epoch of reionization marks the last major phase transition of the Universe, when photons emitted by the first structures ionized and heated the gas surrounding them. A complete understanding of reionization would reveal the properties of the first stars and galaxies, as well as increasing the precision to which the high-redshift intergalactic medium can be used as a cosmological probe. In this talk I will present results from radiative transfer simulations of cosmic reionization and compare them with observations of the Lyman-alpha forest, the pattern of absorption lines observed in quasar spectra. I will show that matching the observed statistics of the Lyman-alpha forest requires reionization to have ended later than previously thought, with islands of neutral hydrogen still found below redshift 5.5. Finally, I will show how this late reionization scenario could impact other reionization observables.

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YouTube Live