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**"Tracing stellar mass assembly during cosmic dawn:
Insights from clustering and stellar mass function in the COSMOS-Web survey"**

Abstract

What is the efficiency of stellar mass assembly in the epoch of reionization? How do environmental factors impact galaxy evolution, especially in the early universe? As JWST's largest extragalactic imaging program, the COSMOS-Web survey is uniquely positioned to explore environments on large and small scales, back to the universe's earliest epochs. Covering 0.5 deg², it offers a panoramic view of galaxies across cosmic history, from dwarfs to the most massives, and provides invaluable insights in the distribution and abundance of galaxies up to cosmic dawn.

To address these questions, galaxy clustering emerges as a powerful tool, inferring halo masses and galaxy assembly biases. Delving into the early universe, we present the very first galaxy clustering measurement up to z~14, revealing a robust link between galaxies and halos. We discuss the implications of these findings and address the current controversy on ΛCDM, putting constraints on dark matter and stellar mass growth in the primordial universe. Additionally, we explore measurements of the stellar mass function at these redshifts, investigating the abundance of unexpected massive galaxies and the contribution of AGNs during cosmic dawn. This study acts as a precursor of high-z analysis in galaxy evolution, indicating potential synergies with upcoming ELT instruments to conduct follow-ups of intriguing objects and further explore the early universe.