Tracking Galaxy Evolution Over 12 Billion Years

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Abstract

ZFOURGE and ZFIRE are sensitive extragalactic surveys that track how galaxies assemble over the past 12 billion years. ZFOURGE identifies and measures cosmological distances to approximately 70,000 objects using a custom set of near-infrared imaging filters. ZFIRE selects galaxies from ZFOURGE for spectroscopic follow-up to measure how baryons cycle between stars, winds, and the Inter-Stellar Medium (ISM). Here I highlight results that include mapping how galaxies are distributed in the distant universe, characterising the galaxies' spectral properties over cosmic time, and determining how galaxies differ depending on their neighbours.