

Talk at Splinter Meeting

Splinter J

THE EVOLUTION OF GALAXY ABUNDANCES FROM $z=2.6$ TO $z=0.8$

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Since the commissioning of LUCI in 2009, we have collected near-IR spectra of star-forming galaxies at $z=1-3$, the peak of cosmic star formation density, to study their emission-line properties. In combination with near-IR IFU observations with SINFONI and KMOS at the VLT, we study the correlations between stellar mass, SFR, and gas-phase oxygen abundance derived from the [NII]/Ha ratio. This provides a unique analysis of the massmetallicity relation (MZR) over an extended redshift range using consistent data analysis techniques and a uniform strong-line metallicity indicator. We find broad agreement with the evolution towards lower metallicities at high- z found in the literature. At a fixed mass and redshift, our data do not show a correlation between the [NII]/Ha ratio and SFR, as has been found locally. The presence of a broad underlying component in the line profile of Ha suggests a high incidence of AGN-driven and/or SF-driven outflows at high masses.