

New Explorations with DEEP of the Metallicities of Gas and Stars at Intermediate Redshifts

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Abstract DEEP is a redshift survey of 50,000 faint field galaxies using the Keck Telescopes. After a brief overview and update of the status of DEEP, this talk will highlight our most recent results in exploring 1) the metallicities and ages of the stellar population within very red field galaxies; and 2) the O/H metallicities and ionization state of the gas as measured from emission lines. Our sample will largely be luminous field galaxies at intermediate redshifts $z \sim 0.7$ to 0.8 , with a particular emphasis on compact galaxies and red galaxies with emission lines.