

Star-forming galaxies at the cosmic dawn

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Over the last half-a-decade significant new insight has been obtained into the properties of the first generations of galaxies. These developments have been driven in part by ultra-deep observations of the Spitzer Space Telescope taken over Hubble deep fields. In this talk I will highlight two major advancements in this field where Spitzer has been critical.

First, the discovery of extreme line emitters in the Epoch of Reionisation. The measurement of extreme [OIII] emission at $z \sim 7$ revealed that these distant sources have short doubling times as well as a hard radiation field, either due to accreting low-mass central black holes or the formation of clusters of metal poor stars. These emission-line galaxies could be responsible for producing a significant fraction of the Lyman continuum radiation needed to bring about cosmic Reionisation.

Second, the development of new selection techniques that rely on the identification of strong line emission in galaxies at $z \sim 7$ and higher. The highly successful follow-up of such galaxies at $z \sim 7$ with ALMA and at $z \sim 8$ with Keck/MOSFIRE have opened up a new window onto to most distant galaxies known.