

The Department of Theoretical Physics presents:

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talking about

Where do emission line galaxies live at $z \sim 1$?

Emission line galaxies trace the cosmic star formation history and moreover, they are being used as tracers of the dark matter distribution up to $z \sim 1$. We have used a state-of-the-art model of galaxy formation and evolution to study the properties of model emission line galaxies, in particular [OII] emitters. To mimic a range of surveys, we select model [OII] emitters by making cuts in [OII] line flux, optical magnitudes and colours. The model [OII] emitters have luminosity functions in reasonable agreement with observations at $z \sim 1$. 95% of these model galaxies are centrals hosted by haloes with $M_{\text{halo}} > 10^{11} M_{\text{sun}}/h$. In the model very few haloes contain more than one [OII] emitter that is a satellite galaxy. Confronting this result to available observations, suggests the need to revise the modelling of hot gas stripping in satellite galaxies. The mean halo occupation distributions of these model galaxies have a global shape typical of star forming galaxies. For central [OII] emitters we have identified that we can split the contribution of central galaxies to the mean halo occupation distribution into an asymmetric Gaussian for central disks and a step function plateauing below one for central spheroids.

Wednesday, April 26, 2017 @ 15:00h, Sala 201 in Módulo M-15