Spectral evidence of multiple stellar populations in z~1 field and cluster early-type galaxies

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Study of the star formation history of z~1 field ETGs by means of the age-dependent indices:

H+K(Call) (Rose, 1985)
Δ(4000) (Hamilton, 1985)

For at least 60% of the field ETGs there is an evidence of the presence of small mass fractions of a younger population coexisting with a much older stellar bulk.

Lonoce et al. 2014 (in press)

Comparison with the cluster sample of Jørgensen & Chiboucas 2013 at z = 0.89

DOUBLE-COMPONENT MODELS:

• Field ETGs
• Cluster ETGs

Available measured indices:

HδA (Worthey & Ottaviani, 1997)
Δ(4000) (Hamilton, 1985)

Cluster ETGs at z ~ 1 have more homogeneous stellar content than field counterparts.