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(CaII) *(Rose, 1985)*
Δ(4000) *(Hamilton, 1985)*

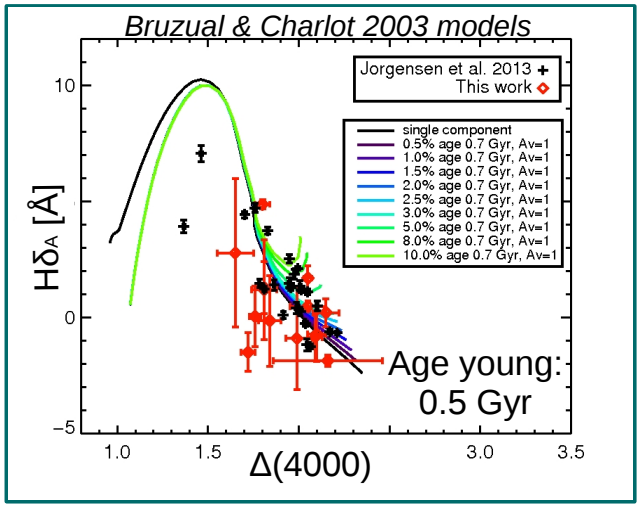
Result

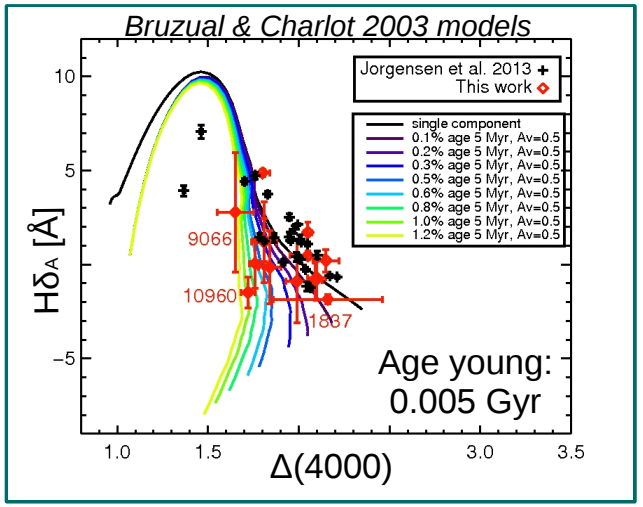
For at least 60% of the field ETGs there is an evidence of the presence of small mass fractions of a younger population coexisting with a much older stellar bulk.

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:

$H\delta_A$ *(Worthey & Ottaviani, 1997)*
Δ(4000) *(Hamilton, 1985)*

Result

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