

**ID 354**

**Sesión Científica:** Galaxias y cosmología

**Título:** The outskirts of massive early-type galaxies at  $\langle z \rangle = 0.65$  in the Hubble Ultra Deep Field

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**Resumen:**

The Hubble Ultra Deep Field (HUDF) opens up an unique window to witness galaxy assembly at all cosmic distances. Thanks to its extraordinary depth, it is a privileged tool to beat the cosmological dimming, which affects any extragalactic observations and has a very strong dependence with redshift –  $(1+z)^4$  –. In particular, massive ( $M_{\text{stellar}} > 5 \times 10^{10} M_{\text{Sun}}$ ) Early Type Galaxies (ETGs) are the most interesting candidates for these studies, as they must grow in an inside-out fashion developing an extended stellar envelope/halo that accounts for their remarkable size evolution (~5 times larger in the nearby Universe than at  $z=2-3$ ). To this end we have analysed the 6 most massive ETGs at  $z < 1$  in the HUDF12. Because of the careful data reduction and the exhaustive treatment of the Point Spread Function (PSF), we are able to trace the galaxy surface brightness profiles up to the same levels as in the local Universe but at  $\langle z \rangle = 0.65$  (31 mag arcsec<sup>-2</sup> in all 8 HST bands, ~29 mag arcsec<sup>-2</sup> restframe or beyond 25 effective radii). This fact enables us to investigate the galactic outskirts or stellar haloes at a previously unexplored era, characterising their light and mass profiles, colors and for the first time the amount of mass in ongoing mergers.