Séminaire organisé par

AIM &Le service d'Astrophysique
CEA/DSM/Irfu

LIVE FAST, DIE...SMALL: THE FALL OF THE FIRST MASSIVE GALAXIES

First Massive Galaxies

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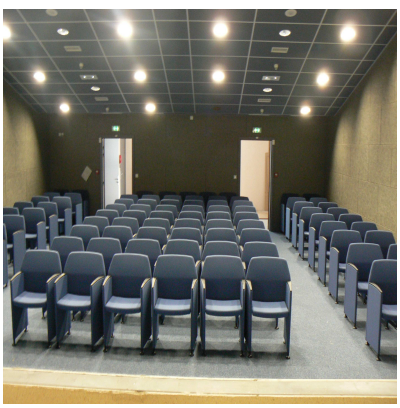
The mechanisms responsible for the remarkably small sizes of the most massive quiescent galaxies at z~2 are poorly understood. Partly because the nature of their progenitors is still unknown. Barro+13 used the deepest CANDELS WFC3/F160W data to identify, for the first time, a population of massive compact star-forming galaxies (cSFGs) at 2 < z < 3, whose structural properties and number densities suggest that they are the progenitors of such population. cSFGs present spheroidal morphologies and centrally-concentrated mass profiles similar to those of quiescent galaxies. However, according to their optical/NIR (UVJ) and far-IR (Spitzer/Herschel) colors, they are strongly star-forming and heavily dust obscured. In Barro+14, we modeled the stellar populations of ~50 cSFGs, using extremely detailed SEDs, finding that cSFGs have stellar masses ranging from M_star = 10^[10.3-11.2] M_sun and maximally old stellar ages of ~2.4 Gyr. Interestingly, we also find that low-mass cSFGs have younger ages but lower sSFR than the more massive cSFGs. This suggest that the most massive galaxies had longer SFHs, contrary to the downsizing intuition.

mardi 1er Juillet 2014

10h00 Salle 003 bât 709 - Orme des Merisiers



Le petit-déjeuner précèdera le séminaire

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