

Service d'Astrophysique
SÉMINAIRE

Mardi 17/11/2015, 10h00-11h00

CEA Saclay, Orme des Merisiers Bat 713, salle de séminaires Galilée

**THE IMPACT OF ENERGETIC PHENOMENA ON
THE EVOLUTION OF GALAXIES AND THEIR
BLACK HOLES – A THEORETICAL PERSPECTIVE**

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IAP

We present new insights from advanced semi-analytic models (SAMs) and modern cosmological simulations indicating a much more complex interplay between different feedback processes and galaxy/black hole (BH) growth than traditionally anticipated. Both, SAMs and large-scale simulations are successful in producing realistic global BH populations e.g. capturing the observed anti-hierarchical trend in BH growth. For that, stellar feedback can play e.g. an important role for the gas accretion onto low-mass BHs at low redshifts. Employing advanced high-resolution zoom simulations, we can confirm and extend previous results that different AGN feedback mechanisms can strongly affect the kinematics and stellar content of massive galaxies, e.g. by regulating their insitu star formation. But contrary to the traditional picture, galactic winds from SN explosions and massive stars are also crucial for the stellar mass assembly of massive galaxies, not only significantly delaying early in situ star formation but also strongly affecting the accreted stellar populations at large radii. Successes and limitations of most recent models and perspectives for future improvements will be given.

Le cafe sera servi 10 minutes avant

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