



Séminaire organisé par

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



GALAXIES AND CLUSTERS AT THE COSMIC NOON AND BEYOND

TADDY KODAMA

(NAOJ; Japan)

We have been conducting Mahalo-Subaru project which targets ~ 10 proto-clusters as well as unbiased general fields for comparison over the redshift interval of $1.5 < z < 3.7$ covering the peak epoch of galaxy formation and beyond.

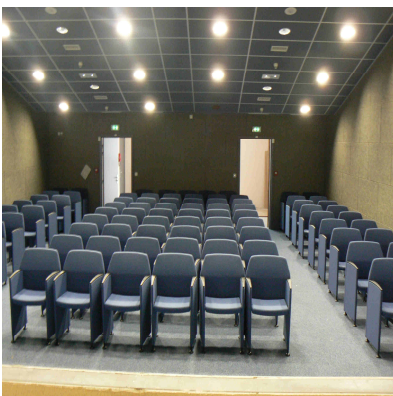
We employ unique sets of narrow-band filters to map out line-emitting star-forming galaxies (e.g., H α , [OIII]) associated to the proto-clusters or in some particular redshift slices in the field.

We show that all the clusters have prominent substructures indicating the early assembly phase, and that star formation activity in the cluster cores is very high at $z \sim 2$, involving a significant fraction of dusty star-bursting galaxies seen as red emitters or SCUBA2 submm sources.

Such strong activities in proto-cluster cores decline sharply as time progresses as $(1+z)^6$, and the peak of star formation activity is shifted outwards to surrounding lower density regions, clearly indicating the "inside-out" formation of galaxy clusters. Using HST imaging, AO-assisted narrow-band imaging (Ganba-Subaru), and ALMA observations (Gracias-ALMA), we are now at the stage of resolving internal structures of individual galaxies to know the physical processes of galaxy formation in action and their environmental dependence. I will review all these on-going projects as well as introducing the up-coming 1-sq.deg. SWIMS-18 survey using 18 filters (6 narrow-bands, 9 medium-bands, and 3 broad-bands) as a natural extension of the Mahalo-Subaru project.

mardi 13 septembre 2016

14h00 Salle Galilée bât 713 - Orme des Merisiers



Le petit-déjeuner précèdera le séminaire

Pascale Chavegrand - secrétariat Irfu/SAP 01.69.08.78.27 chavegrand@cea.fr