

国台学术报告 NAOC COLLOQUIUM

2012 年 第 43 次 / Number 43, 2012

TIME: Friday, 3:00 PM, August 17, 2012 **LOCATION: A601 NAOC**

Searching for the dominant mode of galaxy from deep Herschel surveys

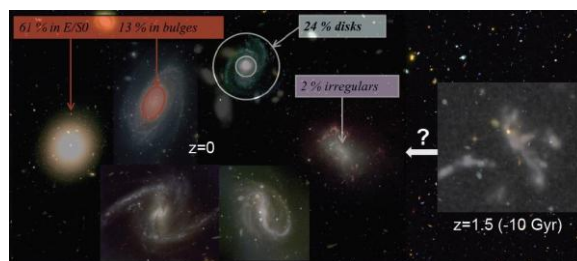


Prof. David Elbaz (CEA Saclay/DAPNIA/Sap)

Prof. David Elbaz is the head of the Cosmology and Galaxy Evolution laboratory at CEA Saclay/DAPNIA/Sap since January 2002, and is a teacher at the master level (M2) at the "Ecole doctorale d'astronomie et d'astrophysique d'ile-de-France", University of Paris VI, VII and XI. Course on "Cosmology and Galaxy Evolution" since 2005. He is the Associate Scientist for the SPIRE and PACS instruments of the future Herschel satellite, for the instrument MIRI of the James Webb Space Telescope satellite (JWST) and of the PLANCK satellite., and responsible for several observational programmes at the Very Large Telescope (VLT) of the European Southern Observatories, and at the Canada France Hawaii Telescope. He got the Chretien Award from the American Astronomical Society (AAS) in 2000.

Abstract

There are many reasons to believe that the physics of galaxy/star formation is a complex process involving turbulence, multiphase physics, magnetic fields, shocks, mergers, environment effects, positive/negative feedback. Yet, early-type galaxies which contain the bulk of present-day stars follow some relatively simple scaling laws. In recent years, it has been found that even star forming galaxies at all epochs follow some simple laws - such as the correlation of their star formation rate and stellar mass in a given redshift slice of the Universe - that help understanding the basic mechanisms through which they formed the bulk of their stars. We will review the latest results obtained with the deepest far-infrared imaging of the deep Universe in the GOODS fields with the Herschel observatory, in the framework of the GOODS-Herschel key project. We will show that the bulk of star forming galaxies appear to follow a Main Sequence (MS), while a fifth of them behave in a starburst mode, surprisingly independent of the actual SFR of galaxies. We will present a way to identify these galaxies with violent and compact star formation. A universal infrared spectral energy distribution will emerge for MS star forming galaxies as well as starbursts. Finally, we will show how these considerations can be used to search for previously unidentified obscured active nuclei.



All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.

You are welcome to nominate speakers to Shude Mao (shude.mao@gmail.com), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn).