

SEMINARIO DEL DEPARTAMENTO DE
FÍSICA TEÓRICA

24 de Noviembre de 2010, 12 h., Módulo 15 (C-XI) aula 201

Unveiling the Nature of the “Green Pea” Galaxies

Enrique Pérez Montero

Instituto de Astrofísica de Andalucía

Abstract: I will present the recent findings of our group about the metal content and the stellar properties of extremely compact star-forming galaxies (SFGs) with redshifts between ~ 0.11 and 0.35 , methods sensitive to the N/O ratio applied to their Sloan Digital Sky Survey (SDSS) spectra reveal that these systems are genuine metal-poor galaxies. We then find that the mass-metallicity relation of the GPs is offset by more than 0.3 dex to lower metallicities. We argue that recent interaction-induced inflow of gas, possibly coupled with a selective metal-rich gas loss, driven by supernova winds, may explain our findings and the known galaxy properties, namely high specific star formation rates, extreme compactness, and disturbed optical morphologies. The “green pea” galaxy properties seem to be uncommon in the nearby universe, suggesting a short and extreme stage of their evolution. Therefore, these galaxies may allow us to study in great detail many processes, such as starburst activity and chemical enrichment, under physical conditions approaching those in galaxies at higher redshifts.

Más información: <http://www.ft.uam.es/seminarios.html>