

ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 18 September 2017

17:00 -18:00

3rd Floor Seminar Room

"Blowing in the wind: studying AGN feedback through X-ray spectroscopy of nuclear winds"

Dr. Matteo Guainazzi

ESA European Space research and Technology Center (ESTEC),
Netherlands

Abstract

A super-massive black hole (SMBH) sits at the center of most, if not all, bulge galaxies. The black hole gravitational potential dominates the gas dynamics on a tiny ($\sim pc^3$) spatial scale only. However, a tight relation exists between black hole mass and the stellar velocity dispersion in the bulge - one of the fundamental relation in modern extra-galactic astrophysics. This suggests that black holes can affect the interstellar gas and the star formation across the whole host galaxy. This happens through a still poorly understood process called "AGN feedback". In this talk I review the observational evidence on outflows launched close to SMBHs, indicating that they may be playing a fundamental role in AGN feedback, in agreement with the prediction of cosmological simulations of galaxy evolution. This process could have occurred in our own Galaxy as well, as recent observational results on IRAS17020+4544, an intriguing Milky Way "twin" indicate