

ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ

ΤΜΗΜΑ ΦΥΣΙΚΗΣ

ΣΕΜΙΝΑΡΙΟ

ΤΟΜΕΑΣ ΑΣΤΡΟΦΥΣΙΚΗΣ, ΑΣΤΡΟΝΟΜΙΑΣ ΚΑΙ
ΜΗΧΑΝΙΚΗΣ

Θέμα: **The large scale jets of powerful Quasars:
Fast and powerful or slow but extreme particle
accelerators?**

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Τόπος: **Εργαστήριο Αστρονομίας, ΑΠΘ**

Ώρα: **12:00**

Περίληψη:

The discovery in 2000 of X-ray emission by Chandra from the large (~ 100 kpc-Mpc) jets of powerful quasars came as a surprise. As a response a model was proposed that explained the X-rays as inverse Compton scattering off the cosmic microwave background (IC/CMB). This requires the large scale jet to be substantially relativistic (Lorentz factor of the flow ~ 10 -20) and to carry a power comparable to or higher than the Eddington luminosity if the system. This model became the de-facto paradigm of the field although a fraction of the astrophysics community kept raising concerns about it. Back in 2006 we proposed a diagnostic for this model that required long Gamma-ray observations. With the arrival of the Gamma-ray telescope Fermi the diagnostic became feasible and in 2014 and 2015 we presented the first two cases of falsifying the IC/CMB model. I will discuss these considerations and what remains to be done and understood to obtain a more realistic understanding of these extreme plasma flows.

Μετά το τέλος της ομιλίας, θα ακολουθήσει συζήτηση με ενδιαφερόμενους φοιτητές, σχετικά με τις διδακτορικές σπουδές στις Η.Π.Α.

Η ομιλία θα μεταδοθεί ζωντανά στη σελίδα:
<http://www.astro.auth.gr/seminars/live/live.html>