



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 3 April 2008
17:00-18:00

3rd Floor Seminar Room

**“Galaxy Formation and Evolution in the
First Billion Years”**

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Abstract

The early Universe was an extremely busy place. Supermassive black holes formed in the peaks of primordial density fluctuations. Gas collapsed in dark matter halos forming the first stars and protogalaxies. These stars cooked the hydrogen and helium into heavier elements and ejected them into the intergalactic medium through supernovae and stellar winds, resulting in rapid metal enrichment of the Universe. At the same time, ultraviolet photons from these first stars ionized and heated the surrounding hydrogen possibly suppressing the formation of stars which are as massive as our Sun. This understanding of galaxy formation and evolution in the first billion years of cosmic time has been developed through deep multi-wavelength observations, spanning the infrared through the X-rays, with 3 of NASA's Great Observatories Spitzer, Hubble and Chandra. I will summarize recent results on the distant Universe from the Great Observatories Origins Deep Survey (GOODS) and discuss open astrophysical questions.