



SCUOLA
NORMALE
SUPERIORE
PISA

Colloqui Classe di Scienze

Mercoledì 11 gennaio 2012

ore 15.00

Scuola Normale Superiore

Pisa

(Sala Stemmi)

Rashid Sunyaev

Max-Planck Institute for Astrophysics & Space Research Institute, Moscow

Terrà un seminario dal titolo:

“Cosmic Microwave Background Radiation, Hot Intergalactic Gas in Clusters of Galaxies and Cosmology”

Abstract:

Clusters of galaxies are the most massive objects in our Universe. They contain dark matter, thousands of galaxies and are filled with hot intergalactic gas radiating in X-rays. The interaction of hot electrons with Cosmic Microwave Background (CMB) photons changes the radiation spectrum in the directions toward clusters of galaxies. As a result clusters become “negative sources” of radiation in the microwave spectral band. This property opens the way to detect all clusters of galaxies (more than 100 000 !!!) in the observable Universe with the forthcoming Planck Surveyor spacecraft and the specifically designed South Pole Telescope, Atacama Cosmology Telescope. Observations of clusters in X-ray and microwave spectral bands will allow to measure the distance to any rich cluster of galaxies and open the way to precisely measure the Hubble constant. The dream is to find “the curve of growth” – the space density of massive clusters of galaxies as a function of redshift or age of the Universe. The shape of this curve will provide important information about key parameters of our Universe and its constituents, including dark energy.

Tutti gli interessati sono invitati a partecipare

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