



ΑΡΙΣΤΟΤΕΛΕΙΟ
ΠΑΝΕΠΙΣΤΗΜΙΟ
ΘΕΣΣΑΛΟΝΙΚΗΣ

ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑ ΦΥΣΙΚΗΣ

Τετάρτη 20 Σεπτεμβρίου 2017

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Αίθουσα Α₃₁

Κύκλος σεμιναρίων

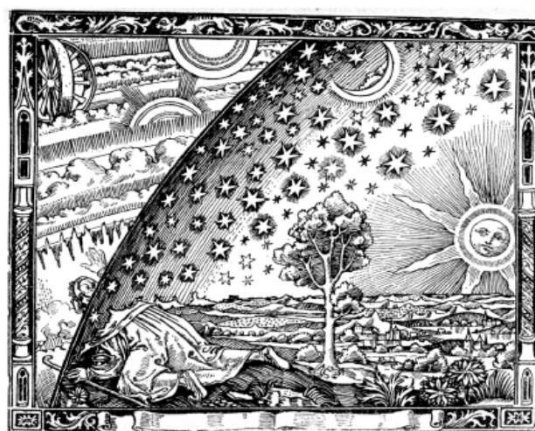


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Beyond the Standard Cosmological Model



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The 'standard' model of cosmology is founded on the basis that the expansion rate of the universe is accelerating at present — as was inferred from the Hubble diagram of Type Ia supernovae. There exists now a much bigger database of supernovae so we can perform rigorous statistical tests to check whether these 'standardisable candles' indeed indicate cosmic acceleration. Taking account of the empirical procedure by which corrections are made to their absolute magnitudes to allow for the varying shape of the light curve and extinction by dust, we find, rather surprisingly, that the data are still quite consistent with a constant rate of expansion. This motivates discussion of the foundations of the standard model, in particular whether dark energy really exists.

Το προφίλ του ομιλητή



Subir Sarkar was educated in India, at the Indian Institute of Technology, Kharagpur and earned his PhD (1982) at the Tata Institute of Fundamental Research, Bombay, where he was also a staff member 1979-84. Subsequently he held visiting positions at CERN Geneva, Oxford Astrophysics, Rutherford Appleton Laboratory, and also worked in science education at Eklavya, Bhopal. Since 1990 he has been back at Oxford - appointed University Lecturer (1998), Professor (2006) and Head of the Particle Theory Group (2012). He is also Niels Bohr Professor at the Niels Bohr Institute, Copenhagen where he spends half his time building up an Astroparticle Physics Group.