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国台学术报告 NAOC COLLOQUIUM

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Time: Wednesday 2:30 PM, Jan. 13th **Location: A601 NAOC**

Dark Energy: constant or time variable?

(... and other open questions)

Dr. Bharat Ratra

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Dr. Bharat Ratra joined Kansas State University in 1996 as an assistant professor of physics. He was a postdoctoral fellow at Princeton University, the California Institute of Technology and the Massachusetts Institute of Technology. He earned a doctorate in physics from Stanford University and a master's degree from the Indian Institute of Technology in New Delhi. He works in the areas of cosmology and astroparticle physics. He researches the structure and evolution of the universe. Two of his current principal interests are developing models for the large-scale matter and radiation distributions in the universe and testing these models by comparing predictions to observational data. In 1988, Dr. Ratra and Jim Peebles proposed the first dynamical dark energy model.

Dark energy is the leading candidate for the mechanism that is responsible for causing the cosmological expansion to accelerate. The discovery that the cosmological expansion is accelerating is one of the most significant scientific discoveries of the last quarter of a century.

Abstract

Experiments and observations over the last decade and a half have persuaded cosmologists that (as yet undetected) dark energy is by far the main component of the energy budget of the universe. I review a few simple dark energy models and compare their predictions to observational data, to derive dark energy model-parameter constraints and to test consistency of different data sets. I conclude with a list of open cosmological questions.

All are welcome! Tea, coffee, biscuits will be served at 2:15 PM.