

# Colloquium Notice

**Michael Blanton**

**Physics, New York University**

*The large-scale structure and history of the universe*

Modern astrophysical observations of the cosmic microwave background, of distant supernovae, and of the distribution of galaxies on very large (billion lightyear) scales has revealed that the Universe is 13.7 billion years old, that the mass in the Universe is mostly in some non-baryonic form ("dark matter"), and that the expansion of the Universe is accelerating due to some unknown physical effect (denoted "dark energy" for convenience). I will discuss this evidence, concentrating on the large-scale distribution of galaxies. In particular, I will discuss the recent detection by the Sloan Digital Sky Survey of the "baryonic acoustic oscillation," the remnants of sound waves in the very early Universe. Finally, I will discuss the prospects for improving our understanding of cosmology by mapping the baryonic acoustic oscillations more precisely and at larger distances.

Monday

**September 10, 2007**

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326