

# Colloquium Notice

**Charles Keeton**

**Rutgers University**

*Studying Galactic Substructure with Gravitational  
Lensing*

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The gravitational deflection of light provides one of the few direct probes of the mass distributions in distant galaxies. More than 80 examples are now known where the gravitational lensing effect produces multiple images of a distant light source, and these "strong" lenses offer important constraints on the dark matter halos around distant galaxies. Recently, 4-image lenses have been used to study whether dark matter halos are smooth or lumpy. This work provides a crucial test of the nature of the dark matter particle, potentially verifying it to be "cold" (as assumed in the popular Cold Dark Matter paradigm) or revealing it to be warm, self-interacting, or otherwise exotic.  
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Monday

**April 24, 2006**

Starts at 12:15 PM

Coffee at 12:00 PM

Physics Conference Room, SB B326