

This Week in Physics

SYRACUSE UNIVERSITY
College of Arts & Sciences

Week of

December 1, 2008

[http://www.phy.syr.edu/
SeminarsEvents.htm](http://www.phy.syr.edu/SeminarsEvents.htm)

DEPARTMENT OF PHYSICS

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MONDAY, DECEMBER 1, 2008

Joint Relativity/Cosmology/High Energy Physics Seminar
2:30 PM, Rm 202

Prof. Erich Poppitz (University of Toronto)
TBA

THURSDAY, DECEMBER 4, 2008

Colloquium
4:00 PM, Rm 202 (refreshments 3:30 PM, Rm 204)

Dr. Andreas Kronfeld, Fermi National Lab
Advances and Puzzles in Quantum Chromodynamics

Quantum chromodynamics (QCD) is the modern theory of the strong nuclear force. Although the basic equations are simple, at "large" distances, greater than 1 femtometer (or 10^{-15} m), the fields become strong. As a consequence, some simple features of QCD, such as the mass of the proton, can be understood quantitatively only via large-scale computer calculations. This colloquium will survey recent, dramatic progress, including results that explain the origin of mass of everyday objects, others that enlighten the patterns of weak decays, and one that poses an intriguing puzzle.

FRIDAY, DECEMBER 5, 2008

Condensed Matter/Biological Physics Seminar
11:00 AM, Rm 202

Prof. Liviu Movileanu (Syracuse University)
Interrogating single proteins with a nanopore: challenges and opportunities