

Joint Quantum Institute Seminar
February 12, 2007 at 12:30
Physics 1201

Strongly interacting atomic Fermi systems

Roberto B. Diener
Ohio State University

Strong interactions are known to lead to novel phenomena in quantum systems. In the case of dilute atomic gases, there are many ways to enhance the effect of interactions. With the use of Feshbach resonances we can reach a limit in which the scattering length diverges at some magnetic field. Putting the atoms in an optical lattice the kinetic energy can be suppressed so that the interaction energy becomes comparable. Rotating the system can even make the interaction energy dominant. I will present results on these three directions to introduce strong interactions in Fermi gases, which promise to deliver new and exciting physics.

Host UMD: Steven Rolston