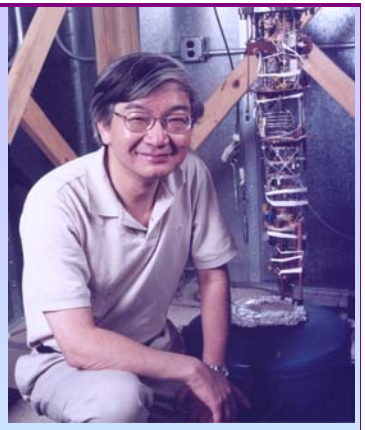
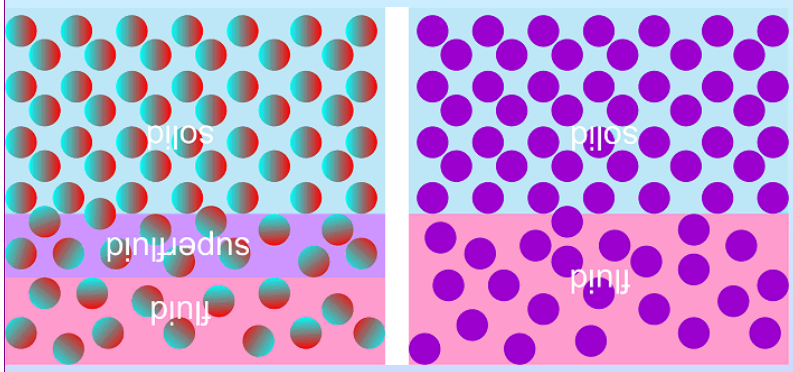
CU Physics Department Colloquium

Monday, February 8, 2010 4:10 PM 428 Pupin Hall

Moses Chan, Penn State University



"Is supersolid a superfluid ?"



Liquid He-4 enters into a superfluid state and flows without any friction below 2.176K. Recent torsional oscillator measurements of solid helium confined in porous media [1] and in bulk form [2] found superfluid-like behavior below 0.2K. These measurements have been replicated in many laboratories. A specific heat peak (3) that appears to be related to the onset of superfluid-like behavior was also found. However, there are outstanding puzzles (4) including the absence of some 'standard' signatures of superfluidity such as dc-mass superflow and second sound. In this talk I will provide a report on the experimental status of the subject.

Hosted by Boris Altshuler – Meet the Speaker at 5:30 pm in 1124 Pupin