

SEMINAR

Tuesday, 18th of February 2014 at 16:00

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Abstract

“Dynamics of blockaded Rydberg gases in low dimensions”

We discuss the quantum phases and dynamics of a gas of two-dimensional Bosons with finite-range soft-core interactions. For low densities, the system is shown to form a solid in which superfluidity is provided by delocalized zero-point defects. This provides the first example of continuous-space supersolidity consistent with the Andreev-Lifshitz-Chester scenario. We further discuss the connection between quantum mechanical supersolid behaviour and a novel mechanism for a glass formation.