Session 25V

Bose-Einstein Condensation **25V1**

E. Cornell

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A Bose-condensed dilute atomic gas is a unique quantum system at the interface between atomic and condensed-matter physics. I will discuss recent experiments with highly distorted vortex lattices, and also evidence for the creation of a Bose condensate of molecules.

Fundamental Issues in quantum gases **25V2**

T.L. Ho

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There have been spectacular experimental developments in quantum gases in the last few years. These experiments have produced a great variety of quantum systems and many new physical environments. They also raise many questions about possible new ground states in quantum gases. In this talk, we shall discuss how internal symmetry, degeneracy in single particle states, reduced dimensionality, and anomalously large s-wave scattering can give rise to new ground states and novel physical phenomena.