

Area Seminar

Title	Profile swapping and pinching in Bose-Fermi mixtures with two-color optical Feshbach resonances
Date and Time	24/02/2011 16:00:00
Speaker	Sandip Gautam
	PRL, Ahmedabad
Area	Theoretical Physics
Venue	Room No. 469
Abstract	<p>We examine the density profiles of the quantum degenerate Bose-Fermi mixture of ^{174}Yb-^{173}Yb, experimentally observed recently, in the mean field regime. In this mixture there is a possibility of tuning the Bose-Bose and Bose-Fermi interactions simultaneously using two well separated optical Feshbach resonances, and it is a good candidate to explore phase separation in Bose-Fermi mixtures. Depending on the Bose-Bose scattering length a_{BB}, as the Bose-Fermi interaction is tuned the density of the fermions is pinched or swapping with bosons occurs.</p>