Area Seminar

Title	When 133Cs condensate meets 87Rb condensate at finite temperature
Date and Time	13/06/2013 16:00:00
Speaker	Arko Roy PRL, Ahmedabad
Area	Theoretical Physics
Venue	Room No. 469
Abstract	In this talk, we shall discuss the effects of finite temperature on the ground state structures of binary condensates in a highly elongated cigar-shaped trap, quasi-1D system. For this the Gross-Pitaevskii (GP) equation, valid at zero temperature, is generalized to include the effects of the interaction of the condensate with the thermal cloud, which is present at finite temperatures. For our study we use the self consistent gapless Hartree-Fock-Bogoliubov-Popov formalism, which was developed tostudy single species condensates at finite temperatures. We generalise the method to binary condensates and use it to study the ground state geometry of phase-separated profiles of binary condensates. In the strongly phase-separated domain we find doubling of Goldstone modes.