Area Seminar

Title	Entanglement verification with Bell's inequality
Date and Time	18/05/2012 11:30:00
Speaker	S.G. Reddy Physical Research Laboratory, Ahmedabad
Area	Theoretical Physics
Venue	Room No. 469
Abstract	Entanglement is one of the interesting phenomena in quantum mechanics. Entangled particles have a lot of applications in various fields such as quantum information, quantum cryptography, quantum teleportation, ghost imaging etc. In our laboratory, we are going to use entangled photon source for ghost imaging, in which we can obtain the spatial information of the object by quantum correlations rather than by capturing the image. To use this source, one needs to verify the entanglement between the photons. Violation of Bell's inequality is one of the best ways to prove the entanglement between two particles. In this talk, I will discuss about Bell's inequality and its violation in quantum mechanics. I will also discuss an experiment in which entangled photon source is used to show the violation of this inequality.