

Area Seminar

Title Optical Vortices - Study of Coherence.

Date and Time 16/07/2010 16:00:00

Speaker Ashok Kumar

Speaker PRL Ahmedabad

Area Theoretical Physics

Venue Room No. 469

Abstract Vortices are ubiquitous in nature; therefore exploring their properties carries a lot of significance to many branches of physics. We, on our part, have embarked on the study of the coherence properties of vortices in light known as optical vortices. These are the light beams with helical wavefront and phase singularities in the optical field. In the present talk, I will discuss field and intensity correlation properties of optical vortices. We will see that the second order coherence i.e. intensity correlation of vortices scattered by a rotating ground glass decays faster than that of a Gaussian laser beam. We observe a linear relationship in correlation time and order of the vortex.