



COLLOQUIUM

Recent Progress in Optical Parametric Amplification

Dr. C. J. McKinstrie

Bell Laboratories, Lucent Technologies

Parametric amplifiers are well-suited for optical communication systems. Not only can they provide high gain for arbitrary signal wavelengths, they can conjugate and squeeze the signals, and convert their wavelengths. Phase conjugation enables the reduction of linear and nonlinear system impairments, and squeezing enables the sub-shot-noise detection of signals.

The talk will include a tutorial introduction to optical communication systems and a review (as time permits) of the physics, and recent experimental demonstrations, of phase-insensitive and phase-sensitive parametric amplification.

Wednesday, October 20, 2004

4:15 p.m. (Refreshments at 4:00 p.m.)

Lyman Spitzer Building, M. B. Gottlieb Auditorium