

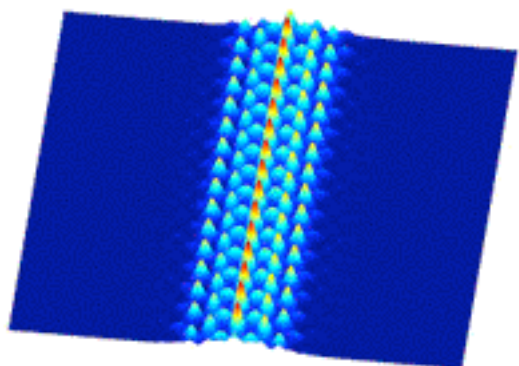
Physics Department Seminar

Friday February 15th, 2008

11:00am in PhSc 108

“Optical precursors: transient effects in optical pulse propagation”

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Abstract:

It was predicted nearly 100 years ago that the wave front in an electromagnetic field that is suddenly turned on propagates through a dispersive media precisely at the speed of light in vacuum. The distinct wave-packets that develop just behind the front are known as optical precursors.

In this talk, I describe a method to increase the duration and amplitude of optical precursors propagating through cold potassium atoms in a magneto-optical trap. The precursor research might be useful for imaging applications requiring penetrating optical radiation, such as in biological systems, or in optical communication system.