Seminar on

Modern Optics and Spectroscopy

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Magnetic resonance spectroscopic imaging: Spatial encoding and applications to disease

October 19, 2004 12:00 – 1:00 p.m.

Abstract

The goal of proton magnetic resonance spectroscopic imaging is to map the spatial distribution of MR-detectable biochemicals in vivo. We describe how time-varying readout gradients can be used to overcome limits on conventional spectroscopic imaging due to the conventional method of spatial encoding. Studies of Alzheimer's disease and multiple sclerosis using these methods with large-volume brain imaging will be presented.