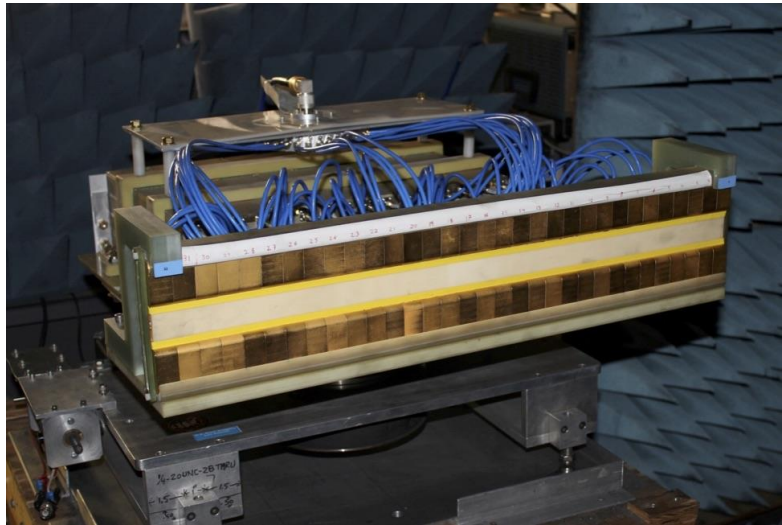


# COLLOQUIUM



Dr. John Singleton  
Los Alamos National laboratory

**Star Trek, Chuck Yeager, gamma-ray bursts and pulsars: antennas inspired by faster-than-light motion - real and fictional - in our Universe**

## Abstract

Since the publication of Einstein's Special Theory of Relativity, few sensible scientists have thought about entities that can move faster than the speed of light in a vacuum. However, this lecture will describe how electromagnetic disturbances known as polarization currents can become superluminal – i.e., exceed light speed - very easily indeed. I will describe our benchtop demonstrations of such effects, plus observations from the visible universe that are almost certainly due to the emissions from accelerated, superluminal polarization currents. The lecture will also cover our efforts to make commercial antennas based on superluminal sources (mini pulsars!), and the applications (for example, secure communications) that these machines may have.

2:00-3:00 p.m., Friday, May 25<sup>th</sup>, McLane Hall 258  
**Special time and place. All are welcome!**