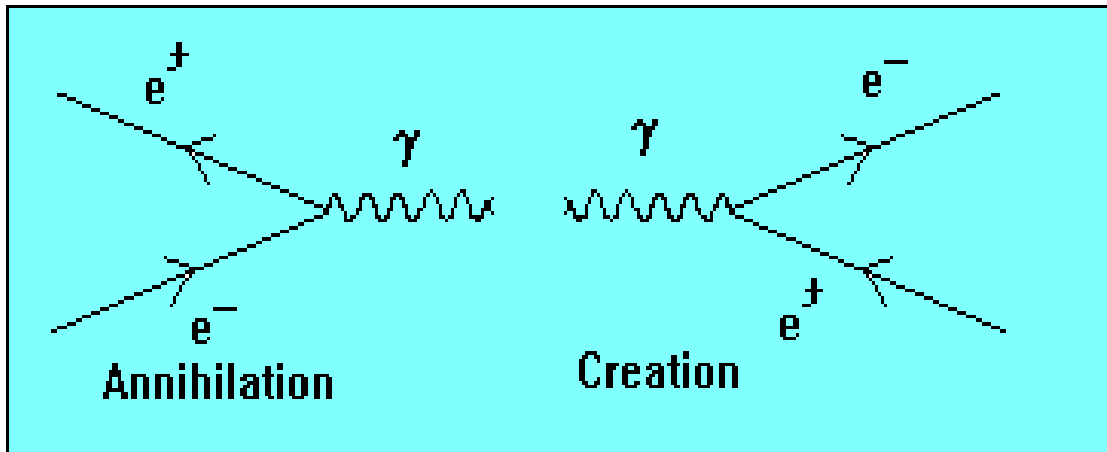




# COLLOQUIUM



Mr. Daniel Tennant  
CSU Fresno

## Scattering of light in Born-Infeld electrodynamics

### Abstract

I will show some novel features of Born-Infeld electrodynamics. It has been shown that in the context of nonlinear electrodynamics that the concept of the vacuum as an independent non-interacting background has to be abandoned and replaced by a medium with nontrivial electric susceptibility and magnetic permeability. In particular, I will calculate the index of refraction of the vacuum in the presence of, a constant magnetic field, and a magnetic dipole field. My main result will be to show that spatially varying electromagnetic fields will cause a deflection in the trajectory of electromagnetic radiation passing through a region where the strength of these fields are significant.

3-4:30 p.m., Friday, April 11<sup>th</sup>  
McLane Hall 162