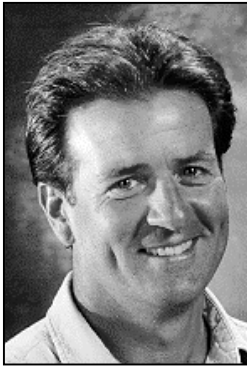
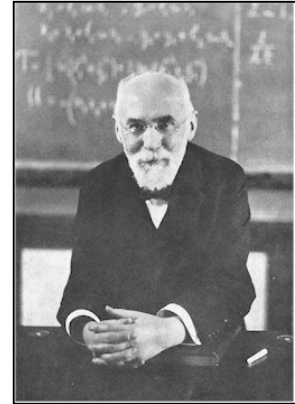


# Physics Department Seminar

Friday February 27<sup>th</sup>, 2004

11:00am in PhSc 105

## “The Kaufmann Experiments and Relativistic Mass”



Dr. Chris Gaffney  
Professor & Chair  
Department of Physics  
CSU Chico

### Abstract:

The theory of special relativity predicts that an object's inertia – resistance to being accelerated – increases with velocity. The property of variable inertia was first studied, not surprisingly, in the case of relativistic electrons. In a series of experiments beginning in 1901 – before Einstein's publications on relativity – Walter Kaufmann measured the velocity dependence of the electron's mass. While his work is often cited in texts as quite early confirmation of special relativity, the experiments were originally interpreted as evidence against Einstein's theoretical predictions. This talk will give an overview of the experiments and the theoretical models used to explain its results.