

Abstract Submitted  
for the APR10 Meeting of  
The American Physical Society

**Testing General Relativity on Cosmological Scales with Weak Gravitational Lensing** ALI VANDERVELD, Caltech/JPL — Weak gravitational lensing is a powerful probe of modifications of General Relativity on cosmological scales, since such modifications can affect both how matter produces gravitational potential wells and how photons move within these wells. I will discuss alternative theories of gravitation and how we may constrain such theories using weak lensing observables, including those that could be obtained with the balloon-borne High Altitude Lensing Observatory (HALO). I will also discuss the “parametrized-post-Friedmannian” approach for obtaining model-independent constraints, in which new parameters are introduced to characterize the departure from General Relativity on large scales.

Ali Vanderveld  
Caltech/JPL

Date submitted: 26 Oct 2009

Electronic form version 1.4