

Abstract Submitted
for the APR05 Meeting of
The American Physical Society

Matching Scherrer's k essence argument with behavior of scalar fields permitting derivation of a cosmological constant ANDREW BECKWITH, TcSAM/ U. of Houston — We previously showed that we can use particle - antiparticle pairs as a model of how nucleation of a new universe occurs. We now can construct a model showing evolution from a dark matter dark energy mix to a pure cosmological constant cosmology due to changes in the slope of the resulting scalar field, using much of Scherrers k-essence model. This same construction permits a use of the speed of sound, in k essence models evolving from zero to one. Having the sound speed eventually reach unity permits matching conventional cosmological constant observations in the aftermath of change of slope of a S-S' pair during the nucleation process of a new universe. This also assumes that Scherrer's derivation of a sound speed being zero is appropriate during initial inflationary cosmology

Andrew Beckwith
TcSAM/ U. of Houston

Date submitted: 04 Mar 2005

Electronic form version 1.4