Abstract Submitted
for the NWS12 Meeting of
The American Physical Society

Effect of Pair Annihilation and Neutrino Decoupling on Cosmological Perturbations ELHAM ALIPOUR, KRIS SIGURDSON, University of British Columbia — The origin and evolution of the primordial perturbations is the key to understanding structure formation. Through their evolution, these primordial fluctuations have generated first the observed Cosmic Microwave Background (CMB) anisotropies and later the distribution of galaxies and dark matter in the Universe. One possibility for the origin of the primordial perturbations is that the fluctuations were generated during a period of inflation. As inflation ended the fluctuations would have been imprinted as initial conditions for the cosmological perturbations on scales far beyond the horizon. Assuming a growing adiabatic mode as the initial condition, we investigated the impact of electron-positron annihilation and neutrino decoupling on the evolution of primordial perturbations and in particular on the gravitational potential transfer function.

Elham Alipour
University of British Columbia

Date submitted: 24 Sep 2012 Electronic form version 1.4