

After a brief review of DBI inflation, I will talk about our recent work , Fields Annihilation and Particles Creation in DBI inflation arXiv:1011.4500. We consider a model of DBI inflation where two stacks of mobile branes are moving ultra relativistically in a warped throat. The stack closer to the tip of the throat is annihilated with the background anti-branes while inflation proceeds by the second stack. The effects of branes annihilation and particles creation during DBI inflation on the curvature perturbations power spectrum and the scalar spectral index are studied. We show that for super-horizon scales, modes which are outside the sound horizon at the time of branes collision, the spectral index has a shift to blue spectrum compared to the standard DBI inflation. For small scales the power spectrum approaches to its background DBI inflation value with the decaying superimposed oscillatory modulations.