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Higher-order massive neutrino perturbations in large-scale structure

Tuesday 15 December 2015 18:00 (20 minutes)

I will present a new first principle approach for higher order perturbation theory for hot and warm dark matter in large scale structure. The approach is based on a non-linear generalization of Gilbert's equation. Combined with standard perturbation theory, it allows to calculate N-point statistics of density perturbations in mixed cold+hot dark matter cosmologies. I apply the theory to compute the leading order bispectrum in a mixed CDM+neutrino universe and use it as benchmark to test the validity of some simple approximations schemes

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