

# Non-local cosmological models from String Field Theory

*Tuesday, 8 September 2009 14:15 (18 minutes)*

cosmological models from String Field Theory In this talk I'm going to review the recent activity on cosmological models involving a non-local scalar field motivated by the String Field Theory focusing on the mathematical aspects and applications to the Dark Energy problem. Models of this type exhibit new interesting properties compared to models with local fields. Exact solutions and behavior of perturbations are presented. Cosmological applications and restrictions coming from the observational data are emphasized. Field theoretical aspects of such non-local models are discussed. Mainly based on: Alexey S. Koshelev, work in progress; Alexey S. Koshelev, Sergey Yu. Vernov, "Cosmological perturbations in SFT inspired non-local scalar field models", arXiv:0903.5176; I. Ya. Aref'eva, A. S. Koshelev, "Cosmological Signature of Tachyon Condensation", JHEP [\textbf{0809}](#) (2008) 068, arXiv:0804.3570; Alexey S. Koshelev, "Non-local SFT Tachyon and Cosmology", JHEP [\textbf{0704}](#) (2007) 029, hep-th/0701103.

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