

## Structure Function and Violation of Scale Invariance in NCSM: Theory and Numerical Analysis

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**Abstract :** In this study, we focus on the structure functions and violation of scale invariance in the context of non-commutative standard model (NCSM). We find that this violation appears in the first order of perturbation theory and a non-commutative version of the DGLAP evolution equation is deduced. Numerical analysis and comparison with experimental data imposes a new bound on the non-commutative parameter.

**Keywords :** NCSM, structure function, DGLAP equation, standard model

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