

Spectral action at high energies

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The noncommutative geometry approach to the Standard Model, based on the spectral action principle by Chamseddine and Connes, is in an amazingly good agreement with the phenomenology (though has certain problems). We consider the spectral action at high energies, and show that some of the problems may be easily resolved. Moreover, the spectral action principle yields universal predictions on the structure of space-time at high but yet sub-planckian energies. (Based on works with B.Iochum, C.Levy, M.Kurkov, F.Lizzi, A.Devastato, C.E.V.Flores).