

Small flux superpotential in F-theory compactifications

Wednesday, 8 December 2021 11:00 (20 minutes)

We investigate whether a class of models describing F-theory compactifications admits a specific type of flux vacua with an exponentially small vacuum expectation value of the superpotential, by generalizing a method recently developed in Type IIB flux compactifications. First we clarify that a restricted choice of G4-flux components reduces a general flux superpotential into a simple form, which promotes the existence of supersymmetric vacua with one flat direction at the perturbative level. Then we utilize the techniques of mirror symmetry to determine one-instanton corrections to the potential and investigate in detail the vacuum solutions of a particular model.

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Session Classification: Short talk