



復旦大學

Fudan University



復旦大學物理系物質科學報告 Physics Department Colloquium

Loop Corrections in Double Field Theory and some cosmological consequences

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Abstract: It was widely believed that a non-trivial dilaton potential is forbidden in the framework of double field theory, which in turn excludes loop corrections in the theory. In this talk, after a brief review on the basics of DFT, I introduce a non-local dilaton field to make up this deficiency. It turns out that, under strong constraint which is necessary to preserve the gauge invariance of double field theory, the theory does permit non-constant dilaton potentials and loop corrections. If the fields have dependence on only one single coordinate, the non-local dilaton is identical to the ordinary one with an additive constant. I then discuss some cosmological consequences of DFT based on an ad hoc dilaton potential.

Time: 2:00pm, Tuesday, 14 October, 2014

Location: Physics Building, Room 221B

(Cookies and coffee will be served from 1:30 pm)