General Relativity and Quantum Cosmology

Nonminimal Inflation on the Randall-Sundrum II Brane with Induced Gravity

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We study an inflation model that inflaton field is non-minimally coupled to the induced scalar curvature on the Randall-Sundrum (RS) II brane. We investigate the effects of the non-minimal coupling on the inflationary dynamics of this braneworld model. Our study shows that the number of e-folds decreases by increasing the value of the non-minimal coupling. We compare our model parameters with the minimal case and also with recent observational data. In comparison with recent observation, we obtain a constraint on the values that the non-minimal coupling attains.

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