



Brane resolution in heterotic theory through BF term

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We have studied the resolution of a naked singularity of a conifold in heterotic theory by a BF topological defect living in a 5-brane. The singularity is removed due to Chern-Simons action that changes the Bianchi identity for the H3 3-form. Following the previous analysis of Cvetic, Lu and Pope where they have studied the resolution through an instanton defect, we have taken a conifold over an Eguchi-Hanson manifold and a harmonic self-dual 2-form related with F2 to solve the differential equation for the warp factor. Since the H3 field is related to torsion in the extra manifold, we can interpret this conifold as one with torsion. Using the so called BF term we have found a solution with the same properties of the instanton such that the conifold is smoothed out and has a torsion that diverges in IR regime and vanishes in UV regime.

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