

F-Theory Description of 3-String Junction

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(Received: 2003-3-12; Revised:)

Abstract: The geometrical description of BPS 3-string junction in the F-theory background is given by lifting a string junction in IIB into F-theory and constructing a holomorphic curve in $K3$ with respect to a special complex structure of $K3$. The holomorphic curve is fibration of 1-cycles of the elliptic fiber over the geodesic string junction. The F-theory picture in this paper provides a unifying description of both string and string junction, and is advantageous over their M-theory picture.

PACS: 11.25.Yb

Key words: M-theory, F-theory, string junction

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