

Two Strings Stuck on a D2-Brane

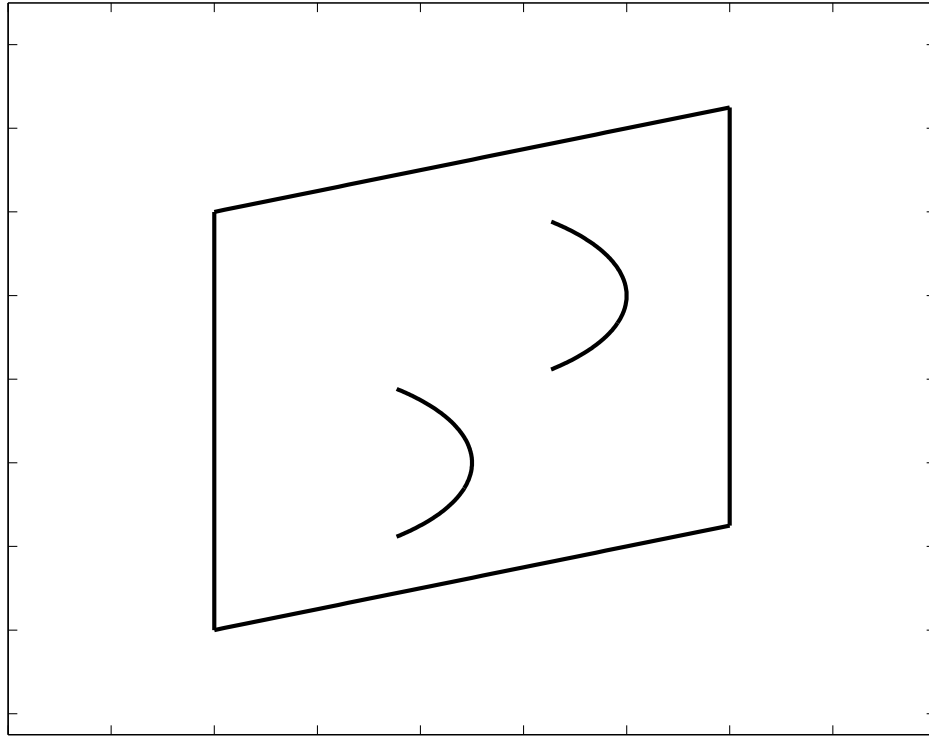


Figure 19.2 Two strings stuck on a D2-brane.

Because the fundamental things of string theory are extended objects, string theory is intrinsically free of ultraviolet divergences. It provides a finite theory of quantum gravity.

19.7 Riemann Surfaces and Moduli

A **homeomorphism** is a map that is one to one and continuous with a continuous inverse. A **Riemann surface** is a two-dimensional real manifold whose open sets U_α are mapped onto open sets of the complex plane \mathbb{C} by **homeomorphisms** z_α whose transition functions $z_\alpha \circ z_\beta^{-1}$ are analytic on the images of the intersections $U_\alpha \cap U_\beta$. Two Riemann surfaces are **equivalent** if they are related by a continuous analytic map that is one to one and onto.

A parameter that distinguishes a Riemann surface from other, inequivalent Riemann surfaces is called a **modulus**. Some Riemann surfaces have