

Intersecting D-branes

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For decades intersecting D-branes and O-planes have been playing a very important role in string phenomenology in the context of particle physics model building and in the context of flux compactifications. The corresponding supergravity equations are hard to solve so generically solutions only exist in a so-called smeared limit where the delta function sources are replaced by constants. We are showing here that supergravity solutions for two perpendicularly intersecting localized sources in flat space do not exist for a generic metric Ansatz. We show this for two intersecting sources with $p = 1, 2, 3, 4, 5, 6$ spatial dimensions that preserve 8 supercharges, and we allow for fully generic fluxes.

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