

Abstract Submitted
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Abelian fibrations, string junctions and type IIA duals of T^6/Z_2

MICHAEL SCHULZ, Bryn Mawr College, RON DONAGI, University of Pennsylvania, PENG GAO, University of Toronto — In previous work, it was argued that the type IIB T^6/Z_2 orientifold with a choice of flux preserving $N = 2$ supersymmetry is dual to a class of purely geometric type IIA compactifications on abelian surface (T^4) fibered Calabi-Yau manifolds. In this talk, I provide two concrete descriptions of the resulting manifolds. The first is a monodromy based description, which generalizes the F-theory technology of 7-branes and string junctions to the case of a T^4 rather than T^2 fiber. The second is an explicit algebro-geometric construction which the T^4 fibers arise as the Jacobian tori of a family of genus-2 Riemann surfaces. After describing some applications of this work, I close with a speculation on a relation between the latter construction and the dimensional duality of Silverstein et al.

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