Non-geometric compactifications from Landau-Ginzburg models

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One of the challenges of Calabi-Yau compactifications is to stabilise the complex structure and Kähler moduli corresponding to the deformations of the internal space. If they were left massless, they would give rise to phenomenologically irrelevant string vacua. In type IIB string theory, only complex structure moduli can be stabilised by turning on fluxes in the internal space. Besides, the tadpole conjecture proposes that the number of stabilised moduli has to grow linearly with the tadpole charge of the fluxes. We study models of compactification constructed from Landau-Ginzburg worldsheet theories, which allow for non-geometric compactifications on Calabi-Yau spaces with no Kähler moduli. These models could in principle explicit vacua with all moduli stabilised by fluxes. We will review the ingredients of flux compactification of the 2⁶ LG model and examine the tadpole conjecture in this framework.

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