

1057-81-165

**Paul S Aspinwall\*** ([psa@cgtp.duke.edu](mailto:psa@cgtp.duke.edu)), Department of Mathematics, Duke University,  
Durham, NC 27708-0320. *Decompactifications and Massless D-Branes in Hybrid Models.*

A simple but interesting class of hybrid models with Landau–Ginzburg fibres over  $CP^n$  are analyzed using special Kahler geometry and a D-brane probes. In some cases the hybrid limit is an infinite distance in moduli space and corresponds to a decompactification. In other cases the hybrid limit is at a finite distance and acquires massless D-branes. An example studied appears to correspond to a novel theory of supergravity with an  $SU(2)$  gauge symmetry where the gauge and gravitational couplings are necessarily tied to each other. (Received January 20, 2010)