

# A ten-dimensional action for non-geometric fluxes

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The NSNS Lagrangian of ten-dimensional supergravity is rewritten via a change of field variables inspired by Generalized Complex Geometry. We obtain a new metric and dilaton, together with an antisymmetric bivector field which leads to a ten-dimensional version of the non-geometric Q-flux. Given the involved global aspects of non-geometric situations, we prescribe to use this new Lagrangian, whose associated action is well-defined in some examples investigated here. This allows us to perform a standard dimensional reduction and to recover the usual contribution of the Q-flux to the four-dimensional scalar potential. An extension of this work to include the R-flux is discussed. The paper also contains a brief review on non-geometry.

Comments: 47 pages; v2: minor modifications, references added, version to be published in JHEP

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