

DEPARTMENTS OF MATHEMATICS AND PHYSICS
UNIVERSITY OF UTAH

STRING GEOMETRY SEMINAR

M-theory, Fluxes, and 3D, N=1 Supergravity

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We calculate the most general N=1 three-dimensional, renormalizable gauge invariant action coupled to matter in superspace and derive its component form. One example of such an action can be obtained by compactifying M-theory on a Spin(7) holonomy manifold taking non-vanishing fluxes into account. We show that the resulting three-dimensional action is indeed in agreement with our more general construction. The resulting scalar potential freezes all the moduli of the internal manifold arising from the metric except for the radial modulus. This potential can be written in terms of the superpotential previously conjectured in the literature.

Thursday, November 20, 2003

3:00 PM — LCB 323