D. Corbett Redden* (dredden@nd.edu), 255 Hurley Hall University of Notre Dame, University of Notre Dame, Notre Dame, IN 46556-4618. Canonical metric connections associated to string structures.

Motivated by wishing to view elliptic cohomology as an obstruction for positive Ricci curvature, we look at canonical metric connections which have possible torsion. The torsion is obtained by looking at the harmonic representative of the string structure in the adiabatic limit, and is a 3-form whose derivative is the first Pontryagin form. (Received February 07, 2006)