

Meeting: 1000, Albuquerque, New Mexico, SS 8A, Special Session on Interactions in Riemannian Geometry

1000-53-127 **Rafael Herrera*** (herrera@gauss.math.csi.cuny.edu), Mathematics Department, The City University of New York, CSI, 2800 Victory Boulevard, Bldg. 1S, Room 215, Staten Island, NY 10314, and **Haydee Herrera**. *The signature of smooth 4-manifolds with S^1 actions.*

We prove that the intersection form of an even, closed, smooth 4-manifold M admitting S^1 actions is bH , where H is the hyperbolic form and b is an integer. The case in which M is spin follows from the Atiyah-Hirzebruch vanishing of the A-roof genus. We prove the vanishing of the signature in the non-spin case by using the elliptic genus. (Received August 21, 2004)