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Mark A Stern* (stern@math.duke.edu) and **Michael Lipnowski**. *Spectral geometry of the 1 form Laplacian on hyperbolic manifolds.*

Motivated by questions arising in analytic torsion, we give geometric lower bounds for the first nonzero eigenvalue of the 1 form Laplacian on hyperbolic 3 manifolds and discuss associated betti number bounds. (Received March 15, 2017)