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Darren B Glass* (dglass@gettysburg.edu), Dept of Mathematics, Gettysburg College, 200 N. Washington Street, Gettysburg, PA 17325. *The relationship between p -ranks and automorphism groups.*

Two invariants of algebraic curves in characteristic p which have led to a large amount of study are the automorphism group of the curve and the p -rank, which measures the number of p -torsion points on the Jacobian of the curve. In this talk, we investigate the relationship between these two invariants, and in particular we prove some results about the restrictions that extra automorphisms place on the 2-ranks of hyperelliptic curves defined over fields of characteristic two. (Received February 15, 2007)