Meeting: 1003, Atlanta, Georgia, SS 32A, AMS Special Session on Arithmetic Algebraic Geometry, I

1003-11-123 **Darren B Glass*** (glass@math.columbia.edu), Dept of Mathematics, Mail Code 4410, 2990 Broadway, New York, NY 10027, and **Rachel J. Pries**, 101 Weber Building, Colorado State University, Fort Collins, CO 80523. *The p-torsion of hyperelliptic curves.*

We show that there exist families of curves (defined over an algebraically closed field k of characteristic $p > 2$) whose Jacobians have interesting p-torsion. For example, for every $0 \leq f \leq g$, we find the dimension of the locus of hyperelliptic curves of genus g with p-rank at most f. We also produce families of curves of large dimension so that the p-torsion of the Jacobian of each fibre contains other group schemes, such as α_p. (Received August 09, 2004)