1027-11-133   **David R Grant*** (`grant@colorado.edu`), Department of Mathematics, University of Colorado at Boulder, Boulder, CO 80309-0395. *A generalization of Jacobi's Derivative Formula to higher derivatives and characteristics.*

We will present a generalization of Jacobi's Derivative Formula relating the determinant of higher order derivatives of theta functions with characteristics to powers of Dedekind's eta function. We will also discuss its arithmetic significance. (Received February 23, 2007)