

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

1003-11-1346      **Robert F. Coleman** ([coleman@math.berkeley.edu](mailto:coleman@math.berkeley.edu)), Department of Mathematics, U. C. Berkeley, Berkeley, CA 94720, and **Ken McMurdy\*** ([mcmurdy@rose-hulman.edu](mailto:mcmurdy@rose-hulman.edu)), Department of Mathematics, Rose-Hulman Institute of Technology, 5500 Wabash Ave., Terre Haute, IN 47803.  
*Stable Reduction of  $X_0(p^3)$ .*

The stable models of the modular curves  $X_0(p)$  and  $X_0(p^2)$  are well understood, due to the work of Deligne-Rapoport, Edixhoven, and others. Recently, the stable model of  $X_0(p^3)$  was determined by the authors, using standard techniques of rigid analysis in combination with moduli-theoretic thinking. In this talk we will state and sketch the proof of this result. We will also discuss implications for the distribution of certain CM points in the supersingular regions of  $X_0(p)$  and  $X_0(p^3)$ . (Received October 06, 2004)