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**Ken McMurdy\*** (kcmurdy@ramapo.edu), Department of Mathematics (TAS), Ramapo College of New Jersey, 505 Ramapo Valley Rd., Mahwah, NJ 07430. *Stable Reduction of  $X_0(625)$ , with Implications.*

In this talk, we will show how to explicitly compute the stable reduction of the modular curve,  $X_0(625)$ , at the prime  $p = 5$ . This example supports a slight variation of an earlier conjecture regarding  $X_0(p^4)$  in the general case, which was based on  $X_0(81)$ . So we will conclude the talk with a statement of the revised conjecture, as well as a brief status report on its proof. (Received September 13, 2008)