1048-16-90 **Michael J Hilgemann*** (hilgem1@iastate.edu), Department of Mathematics, Iowa State University, Ames, IA 50011, and **Siu-Hung Ng**. *Hopf algebras of dimension* $2p^2$.

Let H be a non-semisimple Hopf algebra whose dimension is a product of three primes over an algebraically closed field of characteristic zero. The question of whether there exists such a Hopf algebra H with neither H nor H^* pointed is still open. Fukuda has shown that every non-semisimple Hopf algebra of dimension 18 is either pointed or isomorphic to the dual of a pointed Hopf algebra. In this talk, we will discuss a recent result that completes the classification of Hopf algebras of dimension $2p^2$, for p an odd prime. In particular, we will use irreducible representations and their projective covers to show that if H has dimension $2p^2$ then H or H^* is pointed. This is joint work with Siu-Hung Ng. (Received February 10, 2009)