1017-13-98   **Alan Koch*** (`akoch@agnesscott.edu`), Department of Mathematics, Agnes Scott College, 141 E. College Ave., Decatur, GA 30030. *Calculation of Hopf Orders via Breuil Modules.* Preliminary report.

Let R be a discrete valuation ring with quotient field K and residue field characteristic p, and let A be a finite abelian K-Hopf algebra. We will show how Breuil modules, an analogue of finite Honda systems when R is a ramified extension of $W(k)$, can be used to compute R-Hopf orders inside A, focusing mainly on the case where $\mathrm{Spec}(A)$ is killed by p. When A is a rank p Hopf algebra we will explicitly describe the Breuil modules that give the Hopf orders and determine the maximal Hopf order in A. (Received February 15, 2006)