

1035-20-1118

**Jennifer Froelich\*** (froelich@math.uiowa.edu), The University of Iowa, Department of Mathematics, 14 MacLean Hall, Iowa City, IA 52242. *Endomorphism Rings of Representations of  $S_5$  in Characteristic 2.*

Consider the symmetric group  $S_5$  and its non-trivial double cover  $\tilde{S}_5$  with generalized quaternion Sylow 2-subgroups of order 16. Let  $k$  be an algebraically closed field of characteristic 2 and let  $B_0(kS_5)$  be the principal block of  $kS_5$ . We will discuss how to find all  $B_0(kS_5)$ -modules with stable endomorphism ring isomorphic to  $k$  that also have stable endomorphism ring isomorphic to  $k$  as  $k\tilde{S}_5$ -modules. These modules will have well defined universal deformation rings in the sense of Mazur. (Received September 18, 2007)