1057-05-37   **Aaron Lauve*** (`lauve@math.tamu.edu`), Department of Mathematics, Texas A&M University, MailStop 3368, College Station, TX 77843-3368, and **Sarah K Mason** (`sarahkmason@gmail.com`). *QSym over Sym has a stable basis.*

We prove that the subset of quasisymmetric polynomials conjectured by Bergeron and Reutenauer to be a basis for the coinvariant space of quasisymmetric polynomials is indeed a basis. This provides the first constructive proof of the Garsia–Wallach result stating that quasisymmetric polynomials form a free module over symmetric polynomials and that the dimension of this module is $n!$. (Received December 09, 2009)