

1086-20-1696 **Klaus M Lux*** (klux@math.arizona.edu). *The GAP package Basic 1.0*. Preliminary report.

We present the new version 1.0 of the GAP package Basic, which is joint work with T. Hoffman from Coastal Carolina University. Basic can be used to compute the structure of the projective indecomposable modules for a block of a group in finite characteristic and moreover the basic algebra of the block. Using Basic, we are currently compiling a database of basic algebras for blocks of simple groups of order less than a billion, which can be used for a further investigation of the blocks. We highlight some recent results, illustrate important applications, and discuss new algorithmic enhancements. Finally, we also indicate connections to the GAP packages QPA, Chop, Cond, and Ext. (Received September 24, 2012)