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Julia Pevtsova* (julia@math.washington.edu), julia@math.washington.edu, and **David J Benson, Srikanth B Iyengar** and **Henning Krause**. *Detecting projectivity of modules and nilpotence in cohomology for finite dimensional (graded) Hopf algebras*. Preliminary report.

For a finite group G , classical theorems of Quillen and Chouinard tell us how to detect whether a class in mod p cohomology is nilpotent or whether a module is projective: one has to restrict to elementary abelian subgroups of G . For connected finite group schemes, the detecting family consists of one-parameter subgroups as shown by Suslin, Friedlander, and Bendel. I'll give an overview of these results and describe some new developments in this direction for finite supergroup schemes. (Received September 13, 2017)