1014-20-1486 **Eli Aljadeff** (aljadeff@techunix.technion.ac.il) and **Darrell E Haile*** (haile@indiana.edu), Department of Mathematics, Indiana University, Bloomington, IN 47405, and **Michael Natapov** (natapov@tx.technion.ac.il). *On graded polynomial identities and algebras with a projective basis.* Preliminary report.

We consider the universal graded polynomial identity algebra for a a given fine G–grading on $M_n(C)$, where C denotes the complex numbers. We prove that this algebra is prime, hence an order in a central simple algebra and this central simple algebra is a division algebra if and only if the group G is one of a short list of special groups of central type. We also give a description of the center of this universal algebra. (Received September 28, 2005)