

**Meeting:** 999, Nashville, Tennessee, SS 6A, Special Session on Local and Homological Algebra

999-13-127            **Geoffrey D Dietz\*** ([dietzg@umich.edu](mailto:dietzg@umich.edu)), University of Michigan, Department of Mathematics,  
525 E University Ave, Ann Arbor, MI 48109-1109. *Tight closure in coordinate rings of elliptic  
curves*. Preliminary report.

A prominent open question in the theory of tight closure is whether an element is in the tight closure of an ideal if and only if it is in the contracted-expansion of the ideal from a module-finite extension ring, i.e., does tight closure equal plus closure. Recently, H. Brenner demonstrated that this is the case for homogeneous ideals primary to the homogeneous maximal ideal of a normal homogeneous coordinate ring of an elliptic curve of positive characteristic. We will show how this result can be extended to non-homogeneous ideals primary to the homogeneous maximal ideal and some consequences of this result. (Received August 18, 2004)