Scott T. Parsell* (sparsell@wcupa.edu), Department of Mathematics, West Chester University, 25 University Avenue, West Chester, PA 19383, and Trevor D. Wooley. Exceptional sets for diophantine inequalities. Preliminary report.

We describe new upper bounds for the measure of the set of real numbers not closely approximated by a diagonal form with real coefficients. The arguments employ a version of the classical Davenport-Heilbronn method together with more recent technology related to slim exceptional sets in Waring's problem. (Received August 26, 2009)