1046-13-297 **Bonnie B. Smith*** (bsmith17@nd.edu), Department of Mathematics, 255 Hurley Building, University of Notre Dame, Notre Dame, IN 46556. *The Core of Monomial Ideals in* $K[x, y]$.

The core of an ideal is defined to be the intersection of all its reductions. A reduction of I is a subideal $J \subseteq I$ with the property that $JI^r = I^{r+1}$ for some integer $r \geq 0$. The core arises naturally in the context of the Briançon-Skoda theorem, as well as in algebraic geometry, and in many cases is connected to adjoint (multiplier) ideals. One would like to have a combinatorial description of the core of monomial ideals. I provide such a description for the case of $\mathfrak{m}$-primary monomial ideals in a polynomial ring $K[x, y]$. (Received August 25, 2008)