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Pradeep K. Shukla* (shukla@mcs.suffolk.edu), Department of Mathematics, Suffolk University, Boston, MA 02114, and **V. Lakshmibai**. *On the orbit of the determinant under the action of SL_n* . Preliminary report.

For a positive integer m consider the determinant function on the affine space $V = K^n$, where $n = m^2$ and K is an algebraically closed field. Consider the natural action of $SL_n(K)$ on V which gives rise to its action on $Sym^m(V)$. We give the algebraic description of the orbit closure of the determinant function using Plucker coordinate type functions. (Received February 05, 2008)