1075-14-149 **Joseph Gubeladze*** (soso@sfsu.edu), Department of Mathematics, San Francisco State University, San Francisco, CA 94132. *Tautological part of K-theory of projective toric varieties.* Preliminary report.

For any functor F from (commutative) rings to abelian groups and a graded ring $R = R_0 \oplus R_1 \oplus \cdots$ the group $F(R_0)$ splits off from $F(R)$. The former can be viewed as the *tautological* part of the latter. Speaking geometrically, this is an essentially affine phenomenon. For a field k, how many copies of $K_0(k) = \mathbf{Z}$ can one split off from the Grothendieck group $K_0(X)$ of a projective toric variety X over k? Using Thomason's localization technique and the fundamental theorem of K-theory, one devises an iterative process for splitting off many copies of $K_0(k)$ from $K_0(X)$. The process unavoidably involves higher groups. It also goes through for all higher K-groups and general coefficient rings. Conjecturally, a K-group of a projective toric variety contains at least as many copies of the corresponding K-group of the base ring as the number of vertices of the underlying polytope, i. e., the number of standard affine toric charts. The case of a projective space shows that this is a sharp estimate. (Received August 27, 2011)