

1077-20-688

Gerald W. Schwarz* (schwarz@brandeis.edu), Department of Mathematics MS 050, Brandeis University, PO Box 549110, Waltham, MA 02454, and **Hanspeter Kraft**, Department of Mathematics, Rheinsprung 21, 4051 Basel, Switzerland. *Reduced Null Cones.*

Let G be a complex reductive group and V a G -module. Let $\pi: V \rightarrow V//G$ be the quotient morphism and set $\mathcal{N}(V) = \pi^{-1}(\pi(0))$. We consider the following question. Is the null cone $\mathcal{N}(V)$ reduced, i.e., is the ideal of $\mathcal{N}(V)$ generated by G -invariant polynomials? We have complete results when G is SL_2 , SL_3 or simple of adjoint type and when G is semisimple of adjoint type and the G -module is irreducible. (Received September 10, 2011)