

962-20-658

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Our work provides new results of both a theoretical and an explicit computational nature relative to the determination of support varieties for infinitesimal subgroups  $G_r$  of a reductive algebraic group  $G$ . The results presented involve both the induced modules for the algebraic group  $H^0(\lambda)$  and the induced modules  $Z_r(\lambda)$  for the Frobenius kernels  $G_r$ . In particular, when  $r = 1$ , we demonstrate a nice relationship between the support varieties of these modules. This allows us to completely determine the support varieties for  $H^0(\lambda)$  when the underlying characteristic of the field is good, thus proving a conjecture made by Jantzen in 1987. (Received September 19, 2000)