1035-20-538 **Vahid Dabbaghian*** (vdabbagh@sfu.ca), The IRMACS Centre (ASB 10905), Simon Fraser University, 8888 University Drive, Burnaby, BC V5A1S6, Canada, and **John D. Dixon**.

Computing characters of groups with a solvable normal subgroup.

The so-called Burnside-Dixon-Schneider (BDS) method currently used as the default method of computing character tables in GAP and Magma is often inefficient in dealing with groups with large normal solvable subgroups. If G is a finite group with a cyclic central subgroup Z and λ a linear character of Z, then we describe a method of computing the set $Irr(G, \lambda)$ of irreducible characters χ of G whose restriction χ_Z is a multiple of λ. This method involves only $|Irr(G, \lambda)|$ conjugacy classes of G and so is relatively fast. A generalization of the method can be applied to computation of small sets of characters of groups with a solvable normal subgroup and promises a faster way to compute the character tables of such groups. (Received September 10, 2007)