

**Meeting:** 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-20-700      **Bonnie R Amende\*** (bamende@darkwing.uoregon.edu), 2695 Washington St., Eugene, OR  
97405. *G-irreducible subgroups of type  $A_1$ .*

Let  $G$  be a simple algebraic group over an algebraically closed field of arbitrary characteristic  $p$ . A closed subgroup  $X$  is  $G$ -irreducible if it is not contained in any proper parabolic subgroup of  $G$ . A problem of considerable interest is to classify the  $G$ -irreducible subgroups. We solve the problem when  $G$  is an algebraic group of exceptional type and  $X$  is a subgroup of type  $A_1$ . To solve this problem we first embed  $X$  in a maximal proper closed connected subgroup  $M$  of  $G$ . These groups have been classified by Liebeck and Seitz. If  $X$  is  $G$ -irreducible, then  $X$  is  $M$ -irreducible. The converse is true in most cases. We determine all exceptions. (Received September 28, 2004)