

**Meeting:** 1005, Newark, Delaware, SS 9A, Special Session on Arithmetic Groups and Related Topics

1005-20-45            **Lucy Lifschitz\*** (llifschitz@math.ou.edu), Dept. of Math., Univ. of Oklahoma, 601 Elm Ave., PHSC 423, Norman, OK 73019. *Arithmeticity of rank-1 lattices with dense commensurators in positive characteristic.*

G.Margulis showed that if  $G$  is a semisimple Lie group of  $\Gamma \subset G$  is an irreducible lattice, which has an infinite index in its commensurator, and which satisfies one of the following conditions: 1) it is cocompact; 2) at least one of the simple components of  $G$  is defined over a local field of characteristic zero; 3)  $\text{rank} G \geq 2$ , then  $\Gamma$  is arithmetic. This leaves out the case of non-uniform lattices in rank one simple groups  $G$  defined over a local field of positive characteristic. We show the arithmeticity of the lattice  $\Gamma$  in the remaining case (under the assumption of density of its commensurator). (Received January 20, 2005)