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)