

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

1005-20-25      **Igor V. Erovenko\*** ([igor@uncg.edu](mailto:igor@uncg.edu)), Department of Mathematical Sciences, UNCG, Greensboro, NC 27402, and **Andrei S. Rapinchuk** ([asr3x@virginia.edu](mailto:asr3x@virginia.edu)), Department of Mathematics, PO Box 400137, University of Virginia, Charlottesville, VA 22904-4137. *Bounded generation of  $S$ -arithmetic subgroups of isotropic orthogonal groups over number fields.*

Let  $f$  be a nondegenerate quadratic form in  $n \geq 5$  variables over a number field  $K$  and let  $S$  be a finite set of valuations of  $K$  containing all Archimedean ones. We prove that if the Witt index of  $f$  is  $\geq 2$  or it is 1 and  $S$  contains a non-Archimedean valuation, then the  $S$ -arithmetic subgroups of  $\mathbf{SO}_n(f)$  have bounded generation. These groups provide a series of examples of boundedly generated  $S$ -arithmetic groups in isotropic, but not quasi-split, algebraic groups. (Received January 12, 2005)