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**V. A. Khatskevich** and **M. I. Ostrovskii\***, Department of Mathematics and Computer Sci., St. John's University, 8000 Utopia Parkway, Queens, NY 11439, and **V. S. Shulman**. *Quadratic inequalities for Hilbert space operators*.

The purpose of this talk is to describe conditions under which sets of solutions to inequalities of the form

$$X^*AX + B^*X + X^*B + C \leq 0$$

are convex, where  $A, B, C$  are bounded Hilbert space operators,  $A$  and  $C$  are self-adjoint. Results on topological properties of the solution sets (closeness in standard operator topologies) will also be presented. (Received January 30, 2007)