Alexander Koldobsky* (koldobskiya@missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. Stability and separation in volume comparison problems.

We establish stability and separation in several volume comparison problems, including the Busemann-Petty and Shephard problems on sections and projections of convex bodies. Then we show how these properties can be used to prove hyperplane inequalities for certain classes of bodies. (Received August 11, 2012)