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John P. D'Angelo*, Dept. of Mathematics, Univ. of Illinois, 1409 W. Green St., Urbana, IL 61801. *An easy L^2 estimate and volume computation.*

The $2n$ -dimensional volume of the image of the unit ball under a holomorphic mapping is the sum of the squared L^2 norms of the Jacobians of each n -tuple of component functions. We prove a monotonicity result for such volumes under a tensor product operation. We derive from it a sharp bound for the volume of the image of the unit ball under a proper polynomial mapping of given degree d . This bound is achieved by the map $z \rightarrow z^{\otimes d}$. (Received July 27, 2012)