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Extremal Domains for Self-Commutators in the Bergman Space.

In recent work, Olsen and Reguera have shown that Putnam's inequality for the norm of self-commutators can be improved by a factor of $\frac{1}{2}$ for Toeplitz operators with analytic symbol φ acting on the Bergman space $A^2(\Omega)$ when φ is univalent in Ω . This improved upper bound is sharp when $\varphi(\Omega)$ is a disk. In this talk we show that disks are the only domains for which the upper bound is attained, and explore situations when the symbol is not univalent. (Received September 07, 2014)