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An application of shadow system to Mahler's conjecture

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We will discuss the use of shadow systems to prove a particular case of the conjectured lower bound of the volume product of convex body K and its polar. We will show that if K is the convex hull of two 2-dimensional convex bodies, then the volume product of K is greater than the volume product of the simplex, thus confirming the 3-dimensional case of Mahler conjecture, for this class of bodies. A similar result is provided for symmetric case.

This is a joint work with Matthieu Fradelizi and Mathieu Meyer.

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