

A remark on the slicing problem

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The purpose of this article is to describe a reduction of the slicing problem to the study of the parameter $I_1(K, Z_q^\circ(K)) = \int_K \| \langle \cdot, x \rangle \|_{L_q(K)} dx$. We show that an upper bound of the form $I_1(K, Z_q^\circ(K)) \leq C_1 q^s \sqrt{n} L_K^2$, with $1/2 \leq s \leq 1$, leads to the estimate $L_n \leq \frac{C_2}{\sqrt{4^n \log(n)}} \{q^{(1-s)/2}\}$, where $L_n := \max \{L_K : K \text{ is an isotropic convex body in } \mathbb{R}^n\}$.

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