1042-52-191Grigorios Paouris* (grigoris_paouris@yahoo.co.uk), 2709 Wndwood Dr, College Station, TX77845. Small ball probability estimates for log-concave measures.

Let A a $n \times n$ matrix and μ an isotropic log-concave probability measure that is ψ_2 with some constant b. Then for every $\epsilon \in (0, 1)$, one has that

$$P(\|Ax - y\|_{2} \le \epsilon c_{1} \|A\|_{HS}) \le \epsilon^{\frac{c}{b^{2}} \left(\frac{\|A\|_{HS}}{\|A\|_{op}}\right)^{2}}$$
(1)

where $c, c_1 > 0$ are universal constants.

This answers a question posed to the author by N. Tomczak-Jaegermann. (Received August 18, 2008)