1139-52-461 **Karoly Bezdek*** (kbezdek@ucalgary.ca), Dept. of Math. and Stats., University of Calgary, Calgary, Alberta T2N 1N4, Canada, and **Zsolt Langi**, Budapest University of Technology, Budapest, Hungary. *Minimizing the mean projections of finite ρ-separable packings.*

A packing of translates of a convex body in the d-dimensional Euclidean space $\mathbb{E}^d$ is said to be totally separable if any two packing elements can be separated by a hyperplane of $\mathbb{E}^d$ disjoint from the interior of every packing element. We call the packing $\mathcal{P}$ of translates of a centrally symmetric convex body $\mathbf{C}$ in $\mathbb{E}^d$ a ρ-separable packing for given $\rho \geq 1$ if in every ball concentric to a packing element of $\mathcal{P}$ having radius ρ (measured in the norm generated by $\mathbf{C}$) the corresponding sub-packing of $\mathcal{P}$ is totally separable. The main result of this paper is the following theorem. Consider the convex hull $\mathbf{Q}$ of n non-overlapping translates of an arbitrary centrally symmetric convex body $\mathbf{C}$ forming a ρ-separable packing in $\mathbb{E}^d$ with n being sufficiently large for given $\rho \geq 1$. If $\mathbf{Q}$ has minimal mean i-dimensional projection for given i with $1 \leq i < d$, then the convex polytope $\mathbf{P}$ which is the convex hull of the centres of the packing elements is approximately a d-dimensional ball. This extends a theorem of K. Böröczky Jr. (1994) from translative packings to ρ-separable translative packings for $\rho \geq 1$. (Received February 18, 2018)