1065-52-7 **Márton Naszódi*** (nmarci@math.elte.hu), Dept. of Geometry, Eötvös University, Pázmány Péter sétány 1/c, Budapest, 1117, Hungary. *On the maximal distance between convex bodies in* $\mathbb{R}^n$.

We consider the following version of the Banach–Mazur distance of (non-symmetric) convex bodies in $\mathbb{R}^n$ which was introduced by Grünbaum:

$$d(K, L) = \inf\{|\lambda| : \lambda \in \mathbb{R}, \tilde{K} \subseteq \tilde{L} \subseteq \lambda\tilde{K}\},$$

where the infimum is taken over all non-degenerate affine images $\tilde{K}$ and $\tilde{L}$ of K and L. Gordon, Litvak, Meyer and Pajor showed that for any two convex bodies $d(K, L) \leq n$, moreover, if K is a simplex and $L = -L$ then $d(K, L) = n$. The following question arises naturally: Is equality only attained when one of the sets is a simplex? Leichtweiss, and later Palmon proved that if $d(K, B_2^n) = n$, where B_2^n is the Euclidean ball, then K is the simplex. We proved the affirmative answer to the question in the case when one of the bodies is strictly convex or smooth, thus obtaining a generalization of the result of Leichtweiss and Palmon. Joint work with Carlos Hugo Jiménez, Universidad de Sevilla, Spain. (Received April 27, 2010)