1039-46-102 **Grzegorz C Lewicki*** (Grzegorz.Lewicki@im.uj.edu.pl), Department of Mathematics, Jagiellonian University, 30-059 Krakow, Poland. *On the Grünbaum "4/3" conjecture.* Preliminary report.

Let V be a Banach space and let $\lambda(V)$ denote its absolute projection constant. For any $n, N \in \mathbb{N}$ denote by $S_{n,N}$ the set of all n-dimensional real Banach spaces which can be isometrically embedded in $l_\infty^{(N)}$. Set

$$\lambda_n^N = \sup\{\lambda(V) : V \in S_{n,N}\}$$

and

$$\lambda_n = \sup\{\lambda(V) : dim(V) = n\}.$$

The famous Grünbaum conjecture [1] says that $\lambda_2 = 4/3$. In my talk I will give a sketch of the proof of the fact that

$$\lambda_3^5 = \frac{5 + 4\sqrt{2}}{7}.$$

Also a three-dimensnional space V satisfying $\lambda(V) = \lambda_3^5$ will be determined. In particular, this shows that Proposition 3.1 from [2] is incorrect and consequently the proof of the Grünbaum conjecture presented in [2] is incomplete. Next a sketch of a proof of Grünbaum's conjecture will be given.

[1] B. Grünbaum, *Projection constants,* Trans. Amer. Math. Soc. **95** (1960), 451 -465.

[2] H. König, N. T. Jaegermann, *Norms of minimal projections,* Journal of Functional Analysis **119** (1994), 253 - 280. (Received March 08, 2008)