Correction to: Continuous translation invariant valuations on convex bodies

by U. BETKE and P. R. GODEY

The purpose of this note is to point out an error in our earlier paper [1]. At present it is not clear to us whether the main result, Theorem 1, of that paper is correct. The error lies in our assumption that the mapping i defined in (14) of [1] is an injection. This assumption is later used in an application of the Hahn-Banach theorem which plays a key role in the proof. At present the best result we can obtain using the original techniques is as follows:

Assume φ is a continuous translation invariant valuation on P^d which is homogeneous of degree r for some $r \in \{1, \dots, d-1\}$. Let $(P_i)_{i=1}^\infty$ be a sequence of polytopes which is dense in P^d . There are sequences $(L_n)_{n=1}^\infty$ and $(M_n)_{n=1}^\infty$ in K^d such that

$$\varphi(P_i) = \lim_{n \rightarrow \infty} \{V(L_n; P_i, r; B, d-1-r) - V(M_n; P_i, r; B, d-1-r)\}$$

for all i .

[1] U. BETKE, P. R. GODEY, Continuous translation invariant valuations on convex bodies. Abh. Math. Sem. Hamburg 54 (1984), 95–105.

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