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The Barrier Cone of a Convex Set and the Closure of the Cover

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Abstract: For an arbitrary non-empty closed convex set A in $\mathbb{R}^n$, we prove that the polar of the difference between the barrier cone $\mathbb{B}(A)$ and its interior $\text{int } \mathbb{B} (A)$ coincides with the recession cone $0^+ (\text{cl } \mathbb{G}(A))$ of the closure of the cover $\mathbb{G}(a)$.

Keywords: convex set, barrier cone, recession cone, cover, polar cone

Classification (MSC2000): 52A20

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