On farthest and simultaneous farthest points in Köthe spaces

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ABSTRACT.

Let X be a real Banach space and G be a closed bounded subset of X. For $x \in X$, we set $\rho(x, G) = \sup\{\|x - y\| : y \in G\}$. The set G is called remotal if for any $x \in X$, there exists $g \in G$ such that $\rho(x, G) = \|x - g\|$. In this paper we show that for a separable remotal set $G \subset X$, the set $E(G)$ is remotal in $E(X)$, where $E(X)$ is the Köthe Bochner function space. Some other results are presented.

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