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Som. *Characterization of M -compact sets via statistically convergent sequences.*

In this paper, we study stability of M -compactness for l^p sum of Banach spaces for $1 \leq p < \infty$. We also obtain a characterization of M -compact sets in terms of statistically maximizing sequence, a notion which is weaker than a maximizing sequence. Moreover, we introduce the notion of \mathcal{I} - M -compactness of a bounded subset M of a normed linear space X with respect to an ideal \mathcal{I} and show that it is equivalent to M -compactness for non-trivial admissible ideals. (Received February 10, 2021)