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Stability of positive part of unit ball in Orlicz spaces

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Abstract: The aim of this paper is to investigate the stability of the positive part of the unit ball in Orlicz spaces, endowed with the Luxemburg norm. The convex set Q in a topological vector space is stable if the midpoint map $\Phi: Q \times Q \rightarrow Q$, $\Phi(x, y) = (x + y)/2$ is open with respect to the inherited topology in Q . The main theorem is established: In the Orlicz space $L^\varphi(\mu)$ the stability of the positive part of the unit ball is equivalent to the stability of the unit ball.

Keywords: stable convex set

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