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Diameter of weak neighborhoods and the Radon-Nikodým property in Orlicz-Lorentz spaces.

Given an Orlicz convex function φ and a positive weight w , we present criteria of diameter two property and of Radon-Nikodým property in the Orlicz-Lorentz function and sequence spaces, $\Lambda_{\varphi,w}$ and $\lambda_{\varphi,w}$, respectively. We show that in the spaces $\Lambda_{\varphi,w}$ or $\lambda_{\varphi,w}$ equipped with the Luxemburg norm, the diameter of any relatively weakly subset of the unit ball in these spaces is two if and only if φ does not satisfy the appropriate growth condition Δ_2 , while they do have the Radon-Nikodým property if and only if φ satisfies the appropriate condition Δ_2 . This paper is a joint work with Anna Kamińska. (Received August 23, 2015)