## Paweł Kolwicz The property $(\beta)$ of Orlicz-Bochner sequence spaces

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**Abstract:** A characterization of property  $(\beta)$  of an arbitrary Banach space is given. Next it is proved that the Orlicz-Bochner sequence space  $l_{\Phi}(X)$  has the property  $(\beta)$  if and only if both spaces  $l_{\Phi}$  and X have it also. In particular the Lebesgue-Bochner sequence space  $l_p(X)$  has the property  $(\beta)$  iff X has the property  $(\beta)$ . As a corollary we also obtain a theorem proved directly in [5] which states that in Orlicz sequence spaces equipped with the Luxemburg norm the property  $(\beta)$ , nearly uniform convexity, the drop property and reflexivity are in pairs equivalent.

**Keywords:** Orlicz-Bochner space, property  $(\beta)$ , Orlicz space **AMS Subject Classification:** 46E30, 46E40, 46B20