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Christopher Phan* (c.phan@maths.gla.ac.uk), Department of Mathematics, University of Glasgow, 15 University Gardens, Glasgow, G12 8QW, Scotland. *Graded Ore extensions and the \mathcal{K}_2 property.*

Let A be a connected-graded algebra with trivial module \mathbb{k} , and let B be a graded Ore extension of A . We relate the structure of the Yoneda algebra $E(A) := \text{Ext}_A(\mathbb{k}, \mathbb{k})$ to $E(B)$. Cassidy and Shelton have shown that when A satisfies their \mathcal{K}_2 property, B will also be \mathcal{K}_2 . We prove the converse of this result. (Received January 24, 2010)