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**Robert G. Underwood\*** (runderwo@aum.edu), Auburn University Montgomery, Department of Mathematics, P.O. Box 244023, Montgomery, AL 36124. *Extensions of Group Schemes in Characteristic  $p$ .*

Let  $p$  be a rational prime, let  $n \geq 1$  be an integer and let  $\mathbb{F}_q$  denote the field with  $q = p^n$  elements. Let  $t$  be an indeterminate and let  $R = \mathbb{F}_q[[t]]$  and  $K = \text{Frac}(R) = \mathbb{F}_q((t))$ . Let  $C_p$  denote the cyclic group of order  $p$  generated by  $g$ . For each integer  $i \geq 0$ ,  $H(i) = R[\frac{q-1}{t^i}]$  is an  $R$ -Hopf order in  $KC_p$  corresponding to the group scheme  $\mathbb{G}_i = \text{Spec } H(i)$ . Let  $i, j \geq 0$  be integers. In this talk we investigate the extensions of  $\mathbb{G}_j$  by  $\mathbb{G}_i$ . (Received September 17, 2013)