1172-14-355   **Damian Rossler***, University of Oxford, Andrew Wiles Building, University of Oxford, Andrew Wiles Building, Oxford, OX2 6GG, United Kingdom. *On the group of purely inseparable points of an abelian variety defined over a function field of positive characteristic.*

Let A be an abelian variety over the function field K of a curve over a finite field. We describe several mild geometric conditions ensuring that the group $A(K^{p^{-infty}})$ is finitely generated and that the p-primary torsion subgroup of $A(K^{\mathrm{sep}})$ is finite. This gives partial answers to questions of Scanlon, Ghioca and Moosa, and Poonen and Voloch. We also describe a simple theory (used to prove our results) relating the Harder-Narasimhan filtration of vector bundles to the structure of finite flat group schemes of height one over projective curves over perfect fields. Finally, we use our results to give a complete proof of a conjecture of Esnault and Langer on Verschiebung divisibility of points in abelian varieties over function fields. (Received September 01, 2021)