Rachel Pries* (pries@colostate.edu) and Douglas Ulmer. All $BT_1$’s occur as a direct factor of the $p$-torsion group scheme of a Jacobian. Preliminary report.

An elliptic curve in characteristic $p$ can be ordinary or supersingular. This difference can be measured by its $p$-torsion group scheme. More generally, the $p$-torsion group scheme of an abelian variety in characteristic $p$ is a $BT_1$ group scheme. We prove that every $BT_1$ group scheme occurs as a direct factor of the $p$-torsion group scheme of a Jacobian. (Received September 10, 2020)