1116-14-1479   **Andrew Niles*** (`aniles@holycross.edu`). *The Picard groups of the stacks $Y_0(2)$ and $Y_0(3)$.*

We compute the Picard group of the stack of elliptic curves equipped with a cyclic subgroup of order 2, and of the stack of elliptic curves equipped with a cyclic subgroup of order 3, over any base scheme on which 6 is invertible. This generalizes a result of Fulton-Olsson, who computed the Picard group of the stack of elliptic curves (with no level structure) over a wide variety of base schemes. (Received September 20, 2015)