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Andrew Obus* (andrewobus@gmail.com), University of Virginia, Department of Mathematics, Kerchof Hall, 141 Cabell Drive, Charlottesville, VA 22904, and **Holly Krieger**, **John Doyle**, **Lloyd West**, **Rachel Pries** and **Simon Rubinstein-Salzedo**. *Good and bad reduction of dynatomic modular curves.*

The dynatomic modular curves are curves defined over \mathbb{Z} parameterizing dynamical systems on \mathbb{P}^1 along with periodic points (or periodic orbits). For *quadratic* dynamical systems $x^2 + c$, the corresponding modular curves are smooth in characteristic zero. We give several results about when these curves have good/bad reduction, as well as when the reduction is irreducible. These results are motivated by various uniform boundedness conjectures in arithmetic dynamics. (Received September 15, 2016)