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Samantha Allen* (samantha.g.allen@dartmouth.edu) and **Charles Livingston**. *Unknotting with a single twist*.

Ohyama showed that any knot can be unknotted by performing two full twists, each on a set of parallel strands. We consider the question of whether or not a given knot can be unknotted with a single full twist, and if so, what are the possible linking numbers associated to such a twist. It is observed that if a knot can be unknotted with a single twist, then some surgery on the knot bounds a rational homology ball. Using tools such as classical invariants and invariants arising from Heegaard Floer theory, we give obstructions for a knot to be unknotted with a single twist of a given linking number. In this talk, I will discuss some of these obstructions, their implications (especially for alternating knots), many examples, and some unanswered questions. This talk is based on joint work with Charles Livingston. (Received September 07, 2020)