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Nikola Penev and **Ravi Vakil*** (vakil@math.stanford.edu). *The Chow ring of the moduli space of genus 6 curves.*

We determine the Chow ring (with rational coefficients) of the moduli space of curves of genus 6 by showing that all Chow classes are tautological. In particular, all algebraic cohomology is tautological, and the natural map from Chow to cohomology is injective. We rely on results of many others, notably Faber, Vistoli, and Mukai. To show the efficacy of these methods, we give quick derivations of the Chow groups of moduli spaces of curves of lower genus as well. What makes genus 6 argument tractable (and even short) is the particularly beautiful Brill-Noether theory in this case. This is joint work with Nikola Penev. (Received September 17, 2013)