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Grant S Lakeland* (lakeland@illinois.edu) and **Christopher J Leininger**. *Systoles and Dehn surgery for hyperbolic 3-manifolds.*

Given a closed hyperbolic 3-manifold M of volume V , and a link $L \subset M$ such that the complement $M \setminus L$ is hyperbolic, we establish a bound for the systole length of $M \setminus L$ in terms of V . This extends a result of Adams and Reid, who showed that in the case that M is not hyperbolic, there is a universal bound of $7.35534\dots$. As part of the proof, we establish a bound for the systole length of a non-compact finite volume hyperbolic manifold which grows asymptotically like $\frac{4}{3} \log V$. This is joint work with Chris Leininger. (Received August 17, 2013)