1145-11-49 Kannan Soundararajan and Jesse Thorner* (jthorner@stanford.edu). Weak subconvexity without a Ramanujan hypothesis.

In 2008, Soundararajan obtained a weak subconvexity bound for central values of a large class of L-functions, assuming a weak Ramanujan hypothesis on the size of Dirichlet series coefficients of the L-function. If C denotes the analytic conductor of the L-function in question, then $C^{1/4}$ is the size of the convexity bound, and the weak subconvexity bound established there was of the form $C^{1/4}/(\log C)^{1-\epsilon}$ for any $\epsilon > 0$. I will describe a weak subconvexity bound of the shape $C^{1/4}/(\log C)^{\delta}$ for some small $\delta > 0$, but with a much milder hypothesis on the size of the Dirichlet series coefficients. In particular, our results will apply to all automorphic L-functions, and (with mild restrictions) to the Rankin-Selberg L-functions attached to two automorphic representations. (Received July 06, 2018)