Matthew Dolan Jobrack* (matthew.jobrack@wsu.edu), 317 NW True Street, Pullman, WA 99163. Non-vanishing of the Derivative of L-Functions at the Central Point.

We show that a positive proportion of the derivatives of L-functions associated to holomorphic cusp forms of large weight do not vanish at the central point. Specifically, by optimizing the choice of quadratic form in the mollified moments of the L-function, we prove that this proportion is at least 39%. (Received September 13, 2019)