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**Zhiwei Yun\*** (zhiweiyun@gmail.com), 10 Hillhouse Ave, New Haven, CT 06511, and **Wei Zhang** (wzhang@math.columbia.edu), 2990 Broadway, New York, NY 10027. *Intersection numbers and higher derivatives of L-functions for function fields.*

We prove a higher derivative analogue of the Waldspurger formula and the Gross-Zagier formula in the function field setting. Our formula relates the self-intersection number of certain cycles on the moduli of Shtukas for  $GL(2)$  to higher derivatives of automorphic L-functions for  $GL(2)$ . (Received August 30, 2016)