1157-14-170 **Aaron Landesman*** (aaronlandesman@gmail.com). *The geometric average size of Selmer groups over function fields.*

We show that the average size of n-Selmer groups of elliptic curves over $\mathbb{F}_q(t)$, in a suitable large q limit, is the sum of divisors of n. Loosely speaking, the n-Selmer group of an elliptic curve measures certain objects which are torsors for the n-torsion of the elliptic curve. We relate the question of computing the average size of the n-Selmer group to demonstrating homological stability for a sequence of moduli spaces of these n-Selmer elements, which we then approach using monodromy arguments. (Received January 26, 2020)