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Tamara Kucherenko* (tkucherenko@ccny.cuny.edu) and **Daniel Thompson**. *Measures of maximal entropy on subsystems of topological suspension semi-flows.*

Given a compact topological dynamical system (X, f) with positive entropy and upper semi-continuous entropy map, and any closed invariant subset $Y \subset X$ with positive entropy, we show that there exists a continuous roof function such that the set of measures of maximal entropy for the suspension semi-flow over (X, f) consists precisely of the lifts of measures which maximize entropy on Y . This result has a number of implications for the possible size of the set of measures of maximal entropy for topological suspension flows. In particular, for a suspension flow on the full shift on a finite alphabet, the set of ergodic measures of maximal entropy may be countable, uncountable, or have any finite cardinality. (Received September 16, 2019)