1145-37-29   **Adam Kanigowski**, **Kurt Vinhage** and **Daren Wei*** (`darenwei@psu.edu`), Department of Mathematics, Penn State University, State College, PA 16801. *Slow Entropy of Some Parabolic Flows.*

We study nontrivial entropy invariants in the class of parabolic flows on homogeneous spaces, quasi-unipotent flows. We show that topological complexity (ie, slow entropy) can be computed directly from the Jordan block structure of the adjoint representation. Moreover using uniform polynomial shearing we are able to show that the metric orbit growth (ie, slow entropy) coincides with the topological one, establishing hence variational principle for quasi-unipotent flows (this also applies to the non-compact case). Our results also apply to sequence entropy. We establish criterion for a system to have trivial topological complexity and give some examples in which the measure-theoretic and topological complexities do not coincide for uniquely ergodic systems, violating the intuition of the classical variational principle. (Received June 22, 2018)