

Abelian covers of horocycle flows

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Abstract: In this talk, we consider the unit speed horocycle flow on infinite Abelian covers of compact surfaces of negative curvature. We discuss a result, joint with Roberto Castorri, which describes the asymptotics of ergodic integrals for sufficiently regular observables. In the case of hyperbolic surfaces, we recover a result by Ledrappier and Sarig, for which we additionally provide explicit error rates.