1128-57-238   **Alex Brandts**, **Tali Pinsky** and **Lior Silberman*** (`lior@math.ubc.ca`). *Volumes of hyperbolic three-manifolds associated to modular links.*

Periodic geodesics on the modular surface correspond to periodic orbits of the geodesic flow in its unit tangent bundle $\mathrm{PSL}_2(\mathbb{Z})\backslash\mathrm{PSL}_2(\mathbb{R})$. The complement in the tangent bundle of any finite number of orbits is a hyperbolic 3-manifold, which thus has a well-defined volume.

We present strong numerical evidence that, in the case of the set of geodesics corresponding to the ideal class group of a real quadratic field, the volume of the complement has linear asymptotics in terms of the total length of the geodesics. This is not the case for general sets of geodesics. (Received February 27, 2017)

1