1167-57-121   **David Futer*** (`dfuter@temple.edu`), **Jessica S. Purcell** and **Saul Schleimer**. *Short geodesics under Dehn filling.*

Thurston's hyperbolic Dehn filling theorem has the following consequences for short geodesics:

- The core of the Dehn filling solid torus is very short.

- A short geodesic in the unfilled manifold remains nearly the same length after filling.

I will describe effective results that quantify both of the above statements. In particular, our results provide an explicit criterion on slope length that guarantees the core curve of the filling solid torus is the unique shortest geodesic in the filled manifold. This has useful implications about ruling out cosmetic surgeries. (Received March 01, 2021)