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Leonardo Di Giosia, Jahanger Habib, Lea Kenigsberg, Dylanger Pittman and Weitao Zhu* (wz1@williams.edu). *Isoperimetric Tiling in the Hyperbolic Plane*.

We seek a least-perimeter tile of the hyperbolic plane of given area. Goodman-Strauss proves for example that a non-isosceles triangle tiles the plane if a unique linear combination of the angles of a certain type equals 2π . We generalize his theorem and show that there is a triangular tile of area A if and only if $0 < A < \pi$. Furthermore, we provide some results and conjectures on general polygonal tiles. (Received September 07, 2016)