1176-20-262 **Corey Bregman*** (corey.bregman@maine.edu) and **Merlin Incerti-Medici** (merlin.medici@gmail.com). *The normal growth exponent of a codimension-1 hypersurface of a negatively curved manifold.*

Let M be a closed, negatively curved $(n+1)$-manifold and $N \subset M$ a totally geodesic, codimension-1 submanifold. We define the normal growth exponent of N, which measures the divergence of geodesics orthogonal to the universal cover of N in the universal cover of M. We prove that if N is bi-Lipschitz to a real hyperbolic n-manifold and has normal growth exponent is at most 1, then $\pi_1(M)$ is isomorphic to a lattice in $\mathrm{Isom}(\mathbb{H}^{n+1})$. We also exhibit a family of examples that demonstrate the assumption on the normal growth exponent is necessary in dimensions at least 4. (Received January 24, 2022)