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Dehn Filling and Asymptotically Hyperbolic Einstein manifolds.

We extend Anderson's higher-dimensional Dehn filling construction to a large class of infinite-volume hyperbolic manifolds. This gives an infinite family of topologically distinct asymptotically hyperbolic Einstein manifolds with the same conformal infinity. This construction is done through a gluing procedure, and involves finding a sequence of approximate solutions to the Einstein equations and then perturbing them to exact ones. (Received February 08, 2006)