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Alexander M Zupan* (alexander-zupan@uiowa.edu), 14 MacLean Hall, Department of Mathematics, Iowa City, IA 52242. *Bridge splittings, the pants complex, and hyperbolic volume.*

Every knot K in a 3-manifold M can be decomposed via a bridge splitting; that is, (M, K) can be expressed as the union of two simple pieces along a surface. Using the topology of the attaching map, we may define an integer complexity of such a splitting using the pants complex related to the bridge surface. In the case that K is hyperbolic, we discuss evidence of a relationship between this complexity and the volume of the complement of the knot. (Received January 15, 2012)