Abstract Submitted for the APR15 Meeting of The American Physical Society

Four-dimensional entropy from three-dimensional gravity¹ STEVEN CARLIP, Univ of California - Davis — In loop quantum gravity, the boundary term at a black hole horizon is formally equivalent to an action for three-dimensional gravity. I show how to use this equivalence to obtain the four-dimensional Bekenstein-Hawking entropy from well-understood computations of the entropy of the three-dimensional black hole.

¹supported in part by DOE grant DE-FG02-91ER40674

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Date submitted: 06 Jan 2015

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