Fully Nonlinear Numerical Evolutions of Small-Mass-Ratio Black-Hole Binaries YOSEF ZLOCHOWER, CARLOS LOUSTO, MANUELA CAMPANELLI, HIROYUKI NAKANO, Rochester Institute of Technology — In this talk we present results from the first fully nonlinear numerical simulations of black-hole binaries with mass ratios of 1:100. These simulations are based on the moving puncture formalism with a modified gauge condition and an optimal choice of the mesh refinement. The evolutions start with a small nonspinning black hole just outside the ISCO that orbits twice before plunging. We compute the gravitational radiation, as well as the final remnant parameters, and find close agreement with perturbative estimates.

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