

Abstract Submitted  
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**General-relativistic simulations of quasi-circular inspirals of charged black holes**<sup>1</sup> GABRIELE BOZZOLA, VASILEIOS PASCHALIDIS, University of Arizona — The electric charge is a parameter often neglected in general-relativistic simulations of black holes. As a result, little is known about the dynamics of charged binary black holes in the latest stages of their inspiral. In this talk, we present our first numerical-relativity simulations of quasi-circular mergers of these systems. Using a  $3 + 1$  formalism, we obtained fully self-consistent solutions of Einstein-Maxwell's equations, and extracted the electromagnetic and gravitational output. We will discuss what LIGO-Virgo observations of mergers of binary black holes and the (non-)detections of electromagnetic counterparts can teach us about the charge of astrophysical black holes.

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Gabriele Bozzola  
The University of Arizona

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