

Abstract Submitted
for the APR06 Meeting of
The American Physical Society

Binary Black Hole Evolutions with Moving Punctures: Methods and Numerical Codes. PEDRO MARRONETTI, WOLFGANG TICHY, Florida Atlantic University, BERND BRUEGMANN, University of Jena — Binary Black Holes are strong emitters of gravitational waves and their behavior during the last few orbits can only be accurately described by full general relativistic simulations. Here we present the numerical techniques and programs used for the simulation of such binaries. Our evolutions are performed using the BSSN formulation and the recently introduced “moving punctures” technique. We present the details of our numerical setup, as well as gauge choices and boundary conditions.

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Date submitted: 12 Jan 2006

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