

Abstract Submitted
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Evolving Black Holes with Wavy Initial Data BERNARD KELLY, NASA Goddard Space Flight Center, WOLFGANG TICHY, Florida Atlantic University, YOSEF ZLOCHOWER, MANUELA CAMPANELLI, Rochester Institute of Technology, BERNARD WHITING, University of Florida at Gainesville — In Kelly et al. [Phys. Rev. D v. 76, 024008 (2007)], we presented new binary black-hole initial data adapted to puncture evolutions in numerical relativity. This data satisfies the constraint equations to 2.5 post-Newtonian order, and contains a transverse-traceless “wavy” metric contribution, violating the standard assumption of conformal flatness. We report on progress in evolving this data with a modern moving-puncture implementation of the BSSN equations in several numerical codes. We will discuss the effect of the new metric terms on junk radiation and continuity of physical radiation extracted.

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