

Abstract Submitted
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Resolving Gravitational Memory in Numerical Relativity using Cauchy-characteristic Extraction¹ KEEFE MITMAN, SAUL TEUKOLSKY, MARK SCHEEL, JORDAN MOXON, Caltech — Although gravitational memory was realized in the 1970s, numerical simulations of binary black hole mergers have been unable to resolve this phenomenon until now. We show that by using Cauchy-characteristic extraction (CCE) to extract waveforms in simulations produced by SXS's Spectral Einstein Code, we can accurately resolve the gravitational memory. We present results for memory in simulations with a variety of mass ratios and spins. We also discuss the measurability of memory for both LIGO and LISA.

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