**Characteristic Extraction using Spin-Weighted Spherical Harmonics and Fourier Continuation** CASEY HANDMER, California Institute of Technology — Accurate prediction of gravitational wave signatures for LIGO science require simulation of wave propagation over vast distances. The non-linear nature of GR has necessitated research into techniques including Cauchy Characteristic Extraction (CCE), and Matching to allow feedback over the local simulation boundary. Here, we present a spectral approach to CCE using an integral formalism. This is permitted by the recent development of Fourier continuation (FC), an FFT-fast spectrally accurate basis function with uniform collocation points and thus a relaxed Courant condition.

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