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Neutrino Energetics of Black Hole–Neutron Star Mergers M. BRETT DEATON, Washington State University, SPEC COLLABORATION — We present simulations of black hole–neutron star mergers solving the coupled Einstein-hydrodynamics equations, including radiative cooling and chemical evolution. To this end we have added a leakage approximation to the Spectral Einstein Code (SpEC). The nuclear matter is modeled by the Lattimer & Swesty equation of state. This first in a set of binary configurations uses a low mass ratio ($q = 4$) and high spin ($a = 0.9$). Our choice of parameters is astrophysically optimistic and provides an approximate upper bound on radiation energetics due to the large (initial mass $\sim 0.15 M_\odot$), long-lived (> 150 ms) disk. We examine the energy of neutrino radiation, the dynamics of the remnant disk, and the characteristics of the tidally ejected fluid.

Michael Deaton
Washington State University

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