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Gravitational waves from NS-NS and NS-BH inspirals and the high-density equation of state[1] JOHN L. FRIEDMAN, University of Wisconsin-Milwaukee — This talk reviews recent work by members of UWM's Center for Gravitational Physics and Cosmology and their collaborators on NS-NS and NS-BH inspiral. A parametrized equation of state is used to systematize the constraints imposed by observation on the equation of state of cold matter above nuclear density. Current NS-NS work involves: Determination of surfaces in the equation of state (EOS) parameter space associated with a given departure from the waveform of point-particle inspiral; using waveforms from numerical simulations to calibrate quasiequilibrium sequences and post-Newtonian waveforms; and development of improved initial data codes. Work on BH-NS inspiral includes simulations with an increased range of mass ratios and black-hole spins.

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