APR08-2008-000998

Abstract for an Invited Paper
for the APR08 Meeting of
the American Physical Society

Developing templates for binary black hole coalescences using analytical and numerical relativity

YI PAN, University of Maryland

We shall review the comparisons between analytical and numerical relativity waveforms with the goal of building an analytical template family for inspiral, merger and ring-down phases. The new analytical template family which combines the Post-Newtonian re-summed dynamics a la effective-one-body and non-perturbative numerical relativity information may already be employed for coherent searches and parameter estimation of gravitational waves emitted by non-spinning coalescing binary black holes, and can be extended to binaries with spinning black holes.