

Rapid parameter estimation for compact binary coalescence events in LIGO data

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The benefit of prompt and accurate estimation of the parameters of binary coalescences is obvious in its coupling to electromagnetic observations. Popular Bayesian schemes to measure properties of compact object binaries use Markovian sampling to compute the posterior. While very successful, in some cases, convergence is delayed until well after the electromagnetic fluence has subsided thus diminishing the potential science return. In this talk, I discuss a scheme which is also Bayesian, but has a drastically lower convergence time of a few tens of minutes. I will describe recent studies to reduce the latency of results further, and demonstrate the capabilities of our parameter estimation framework.