

Abstract Submitted
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Rapid parameter estimation of gravitational wave signals for the multi messenger era DANIEL FINSTAD, Syracuse University, BRIAN METZGER, Columbia University, EDO BERGER, Harvard University, DUNCAN BROWN, Syracuse University — As the era of multi-messenger astronomy continues there will be an increasing number of gravitational wave candidate events in need of a coordinated electromagnetic followup campaign. Fast and accurate identification of signals that are most interesting or most likely to produce an electromagnetic counterpart will be of primary importance in order to make best use of valuable telescope time and capture the most complete picture of astrophysical events. We demonstrate a method to produce accurate parameter estimates from binary neutron star and neutron star-black hole signals in very low latency by extending the method of [Zackay et al, 2018]. We generate a population of simulated binary coalescence signals and measure their source properties using this method, and we discuss implications for understanding of neutron stars and binary systems.

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