

UM Physics Department

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Title: Recent Results from LIGO and Virgo

Abstract:

Recently the LIGO and Virgo Collaborations reported on 39 candidate gravitational wave discoveries from compact binary coalescences detected by Advanced LIGO and Advanced Virgo between 1 April 2019 and 1 October 2019. This new catalog contains events whose sources are black hole binary mergers up to a redshift of ~ 0.8 , as well as events which could plausibly originate from binary neutron stars, neutron star-black hole binaries, or binary black holes. The range of candidate events which are unambiguously identified as binary black holes (both objects $\geq 3 M_{\odot}$) have total masses between $\sim 14 M_{\odot}$ and $\sim 150 M_{\odot}$. I will describe these new discoveries and provide an overview of ongoing activities in the LIGO/Virgo search for compact binary coalescence.