

Stochastic gravitational wave background from binary primordial black hole mergers

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The Advanced LIGO's discovery of gravitational-wave events GW150914 and GW151226 has stimulated extensive studies on the origin of binary black holes. Supposing the gravitational-wave events could be explained by binary primordial black hole mergers, we investigated the corresponding stochastic gravitational-wave background and pointed out the possibility to detect this background by the Advanced LIGO in the near future. We used the non-detection of stochastic gravitational-wave background to give a new independent constraint on the abundance of primordial black holes in dark matter. The recent progress will be presented here.

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