

Abstract Submitted
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New estimate of coincident rates between gravitational-wave and short gamma-ray burst observations by Advanced LIGO and Virgo¹ KENTARO MOGUSHI, Univ of Mississippi, KARELLE SIELLEZ, Georgia Institute of Technology, MARCO CAVAGLI'A, Univ of Mississippi — Short Gamma-Ray Burst (sGRB) progenitors have long been thought to be coalescing compact system of two Neutron Stars (NSNS) or a Neutron Star and a Black Hole (NSBH). The recent detection of a gravitational-wave signal in coincidence with electromagnetic observations confirmed this scenario and provided new physical information on the nature of these astronomical events. More coincident events should reveal paramount features of these coalescences. We use sGRB observations by the Swift satellite to estimate the rate of detectable coincident gravitational-wave and electromagnetic observations by the Advanced LIGO and Advanced Virgo detectors in future observing runs. We present a comprehensive discussion of the factors affecting this estimate.

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