

Abstract Submitted
for the SES17 Meeting of
The American Physical Society

High Energy Follow-up Study of Gravitational Wave Transients

BRANDON BARKER, University of Tennessee — As second-generation gravitational wave interferometers, such as Advanced Virgo and Advanced LIGO, reach their design sensitivities, a new lens into our universe will become available. Many of the most violent and energetic events in the cosmos, in particular the merger of compact objects and core collapse supernovae, are sources of gravitational waves and are also believed to be connected with Gamma Ray Bursts. Joint observations of electromagnetic and gravitational wave signals will provide an ideal opportunity to study the physics of these transient events and their progenitors. In particular, gamma ray observatories such as Fermi, coupled with precise sky localization, will be crucial to observe the high energy electromagnetic counterparts to gravitational wave signals. We constructed joint binary neutron star and gamma ray burst detection rate estimates using an analysis pipeline and report on the results of this analysis.

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Date submitted: 03 Oct 2017

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