

Abstract Submitted  
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**Predictions for Swift Follow-up Observations of Advanced LIGO/Virgo Gravitational Wave Sources** JUDITH RACUSIN, NASA/GSFC, PHIL EVANS, University of Leicester, VALERIE CONNAUGHTON, University of Alabama in Huntsville — The likely detection of gravitational waves associated with the inspiral of neutron star binaries by the upcoming advanced LIGO/Virgo observatories will be complemented by searches for electromagnetic counterparts over large areas of the sky by Swift and other observatories. As short gamma-ray bursts (GRB) are the most likely electromagnetic counterpart candidates to these sources, we can make predictions based upon the last decade of GRB observations by Swift and Fermi. Swift is uniquely capable of accurately localizing new transients rapidly over large areas of the sky in single and tiled pointings, enabling ground-based follow-up. We describe simulations of the detectability of short GRB afterglows by Swift given existing and hypothetical tiling schemes with realistic observing conditions and delays, which guide the optimal observing strategy and improvements provided by coincident detection with observatories such as Fermi-GBM.

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