

Abstract Submitted
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Modeling Gravitational Wave Emission from Soft Gamma Repeaters¹ CHRISTIAN D. OTT, TAPIR, California Institute of Technology, PETER KALMUS, LIGO Laboratory, California Institute of Technology — Soft gamma repeaters and anomalous x-ray pulsars are thought to be magnetars: neutron stars with extreme magnetic fields. When active they sporadically emit sudden bursts of soft gamma rays. The majority of these bursts have total energies of 10^{42} erg or less (isotropic), but three “giant flares” have had measured energies between 10^{45} and 10^{47} ergs. We perform 3D, fully general relativistic hydrodynamics simulations to model the gravitational wave (GW) emission due to global neutron star pulsational modes that may be excited during a burst. We discuss the relevant parameter space and connect our results to recent searches for GW from magnetars performed by the interferometric GW observatories.

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