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Light curves from binary neutron star coalescence NESTOR ORTIZ, STEPHEN GREEN, LUIS LEHNER, Perimeter Institute for Theoretical Physics, MARCELO PONCE, SciNet, HAD COLLABORATION — Evolution of binary neutron stars, and the extraction of associated gravitational waveforms, have acquired certain maturity using numerical simulations. In this work we look to augment the observational predictions by extracting electromagnetic counterparts. That is, given results from a merger simulation, we produce a photon emission sky map. Our ray-tracing algorithm employ the two-pole caustic model of gamma-ray emission from the binary system's magnetosphere. The combined measurement of both gravitational and electromagnetic wave signals provides additional information to characterize the merger.

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