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Radio Detection of Neutron Star Binary Mergers BRANDON BEAR, Virginia Tech, BRETT CARDENA, DANA DISPOTO, JOANNA PAPADOPOULOS, The College of New Jersey, MICHAEL KAVIC, Long Island University, JOHN SIMONETTI, Virginia Tech — Neutron star binary systems lose energy through gravitational radiation, and eventually merge. The gravitational radiation from the merger can be detected by the Laser Interferometer Gravitational-Wave Observatory (LIGO). It is expected that a transient radio pulse will also be produced during the merger event. Detection of such radio transients would allow for LIGO to search for signals within constrained time periods. We calculate the LWA-1 detection rate of transient events from neutron star binary mergers. We calculate the detection rate of transient events from neutron star binary mergers for the Long Wavelength Array and the Eight-meter-wavelength Transient Array.

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