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### **Inferring Neutron Star Merger Rates from Short Gamma-Ray Burst Observations**

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Neutron Star mergers are canonical multimessenger sources, observations of which enable unique insights into dense matter, fundamental physics, the origin of the elements, ultrarelativistic particle acceleration, and more. Their intrinsic rate in the local universe and its evolution through cosmic time inform on stellar evolution, the heavy (r-process) enrichment history, and determines how often we can expect them. The local rate can currently be directly measured from gravitational wave observations, with values currently based on 2 detections. The cosmic rate can also be determined from observations of short gamma-ray bursts, where we currently have a sample 2 to 3 orders of magnitude larger; however, these inferred rates are model-dependent. I will review the inferred rates prior to GRB 170817A, how what we learned from this event altered our expectations, and outline the science gained from measuring the local rate in different messengers.