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Searching for GRBs Associated with Gravitational Waves

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The joint detection of a binary neutron star merger GW170817 in gravitational waves (GWs) by Advanced LIGO/Virgo and the short gamma-ray burst GRB 170817A by the Fermi Gamma-ray Burst Monitor (GBM) hailed the beginning of gravitational-wave multi-messenger astronomy. The extraordinary properties of GRB 170817A were brought to light in context of the GW observations, spectacularly demonstrating that multi-messenger observations can maximize the science gained from astrophysical events. In this talk, we will present the capability to detect bursts like GRB 170817A through subthreshold searches of GBM data. We will also discuss GBM follow-up of LIGO/Virgos second and third observing runs. Finally, we will look to the future science that can made with joint GW/gamma-ray observations.