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Searching for GRB Counterparts to Gravitational-wave Events with Fermi-GBM

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The Fermi Gamma-ray Burst Monitor (GBM) is an all sky monitoring instrument sensitive to photon energies from 8 keV to 40 MeV. Its capabilities allow it to observe around 40 short gamma-ray bursts (GRBs) each year through on-board triggers alone, making it ideal for providing simultaneous gamma-ray observations of gravitational wave events. This fact was proven through the on-board detection of GRB 170817A and the associated binary neutron star merger event GW170817, which was a major milestone in multimessenger astronomy. Fermi-GBM continues to look for similar gravitational-wave counterparts through on-board triggers as well as subthreshold searches for weak transients, performed both in high-time-resolution continuous data and in targeted follow-ups. I will provide an overview of these searches and their recent results.

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