

Abstract Submitted
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The Fermi Gamma-ray Burst Monitor Targeted Search DANIEL KOCEVSKI, NASA, FERMI GAMMA-RAY BURST MONITOR TEAM — The Fermi Gamma-ray Space Telescopes Gamma-ray Burst Monitor (GBM) is currently the most prolific detector of Gamma-ray Bursts (GRBs). Recently the detection rate of short GRBs (sGRBs) has been increased dramatically through the use of ground-based searches to analyze untriggered GBM continuous time tagged event (CTTE) data. These offline searches can employ sophisticated analysis methods that are not achievable in real time due to the limited computational resources available on the spacecraft. Here we outline a method developed by the GBM team to search CTTE data for transient events in temporal coincidence with a LIGO/Virgo compact binary coalescence trigger. This targeted search operates by looking for a coherent signal in all 14 GBM detectors by using spectral templates that are convolved with the GBM detector responses. I will review recent improvements to the targeted search pipeline and discuss its enhanced capabilities at detecting weak transient signals associated with LIGO/Virgo triggers in the upcoming O3 science run. I will also discuss the role of the targeted search in finding a possible GBM counterpart to GW150914 and will compare that signal to other known astrophysical transients that can be recovered from the untriggered GBM data using this method.

Daniel Kocevski
NASA/GSFC

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