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Fermi/GBM's key role at the dawn of the era of multimessenger astronomy

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The detection of the gravitational wave event GW170817 by LIGO and Virgo was accompanied by the independent detection of the short Gamma-ray Burst GRB 170817A by the Gamma-ray Burst Monitor (GBM) of NASA's Fermi mission. This discovery was complemented by the detection of a weak coincident signal in the data of the Anti-Coincidence Shield ACS of Spectrometer SPI onboard ESA's INTEGRAL mission. Here we focus on the results by Fermi-GBM, discussing the characteristics of this ordinary short GRB, which extraordinarily confirms that at least some short GRBs are produced by binary compact mergers. We show that the observed time delay between the gravitational and electromagnetic event of about 1.7 s could impose constraints on fundamental physics. Finally, we want to discuss Fermi/GBM's prospects for the upcoming O3 observation run of LIGO/Virgo.

Author: VON KIENLIN, Andreas (MPE)

Presenter: VON KIENLIN, Andreas (MPE)