

Gamma-ray burst observation & gravitational wave event follow-up with CALET on the International Space Station

Tuesday 20 July 2021 19:18 (12 minutes)

The CALorimetric Electron Telescope (CALET) has been observing high energy cosmic rays and gamma-rays on the International Space Station since October 2015. The Calorimeter (CAL), the primary instrument of the CALET, has been collecting high-energy gamma-ray data above 1 GeV. The CALET gamma-ray burst monitor (CGBM), utilizing bismuth germanate and lanthanum bromide scintillation detectors, is mounted on the CALET for gamma-ray burst (GRB) observation. CGBM has detected more than 230 GRBs in five years of observation since October 2015. In this work, we summarize the GRB observations with CGBM in the five years of the operation and the search for high energy gamma-rays from the CGBM GRBs with the CAL. Since CALET had been in operation during the LIGO/Virgo third observation run (O3 run), we also present the results of the CALET follow-up search for gravitational wave events in the O3 run associated with GRBs.

Keywords

GRB; gravitational wave;

Collaboration

CALET

other Collaboration

Subcategory

Experimental Results

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Session Classification: Discussion

Track Classification: Scientific Field: MM | Multi-Messenger