

INVITED LECTURE

GRBAAlpha - the smallest astrophysical space observatory

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Since launched in March 2021, the 1U-sized CubeSat named GRBAAlpha has been provided valuable measurements and detections related to gamma-ray bursts and another types of high-energy transient phenomena. Due to its small size, therefore, GRBAAlpha can be coined as the smallest astrophysical space observatory to date. In this presentation I summarize the key steps and milestones related to this otherwise fully-fledged mission: starting from our ideas and initiatives, detector and system design, ground testing and calibration procedure, platform-level and system integration up to the present-day in-orbit operations phase, including commissioning, initial operations, data handling and telemetry, on-board and ground data processing and steps towards properly calibrated scientific data series. In addition, I discuss the status of future plans of this mission include the possibility of further flight software upgrades, aiming to increase the data volume downlink, sampling cadence and to operate our satellite as a discovery engine at the same time.

