

First Results from the DAMPE Mission

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DAMPE (Dark Matter Particle Explorer) is a satellite mission of the Chinese Academy of Sciences (CAS) dedicated to high energy cosmic ray detections. Since its successful launch on December 17th, 2015 a large amount of cosmic ray data has been collected. With relatively large acceptance, DAMPE is designed to detect electrons (and positrons) up to 10 TeV with unprecedented energy resolution to search for new features in the cosmic ray electron plus positron (CRE) spectrum. It will also study cosmic ray nuclei up to 100 TeV with good precision, which will bring new input to the study of their still unknown origin and their propagation through the Galaxy.

In this talk, the DAMPE mission will be introduced, together with some details of the construction and on-ground calibration of the detector subsystems. The in-orbit detector commissioning, calibration and operation will be described. First data analysis results will be presented.

Primary authors: WU, Xin (Universite de Geneve (CH)); FOR DAMPE COLLABORATION; TYKHONOV, Andrii (Universite de Geneve (CH))

Presenter: TYKHONOV, Andrii (Universite de Geneve (CH))

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