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## Monte Carlo Helium Data Analysis for the ISS-CREAM Instrument

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The Cosmic Ray Energetics and Mass for the International Space Station (ISS-CREAM) is designed to directly measure the energy spectra of high-energy cosmic rays, ranging from protons to iron nuclei, over the energy range of  $\sim 10^{12}$  to  $\sim 10^{15}$  eV. The goal of the instrument is to probe the origin, propagation and acceleration mechanisms of cosmic rays. The instrument comprises of a tungsten scintillating-fiber Calorimeter for energy measurements, four layers of finely segmented Silicon Charge Detectors for charge measurements, and two additional detectors for electron/hadron separation. The Calorimeter also provides the main high energy physics trigger, while the Top and Bottom scintillator-based counting detectors provide an additional low energy trigger. For consistency with the balloon-borne CREAM experiment analyses, the GEANT3 package with the FLUKA hadronic model was used for the simulations. The presented analysis focuses on isotropically generated helium nuclei events incident from the upper hemisphere onto the detector geometry. A comprehensive overview of the MC data analysis and its results, such as the detector efficiency, calorimeter energy response, position and charge resolutions, for the ISS-CREAM instrument will be presented.

### Collaboration(s)

ISS-CREAM Collaboration

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