

Precision Measurement of Cosmic-Ray Deuterons with the Alpha Magnetic Spectrometer

Eduardo F. Bueno on behalf of the AMS collaboration

What is this contribution about?

This contribution reports the preliminary results of the deuteron flux, deuteron-to-proton and deuteron-to-helium flux ratios measured by AMS-02.

Why is it interesting?

Fluxes of secondary particles in cosmic rays carry important information about the propagation processes and properties of the ISM. Deuterons are not only the lightest, but also the most abundant secondary nuclei.

What have we done?

A method to identify deuterons and protons in cosmic rays was developed, allowing for precise measurement of $Z = 1$ isotopic fluxes.

What are the results?

The results are the deuteron flux from 0.2 to 10 GeV/n, as well as the deuteron-to-proton and deuteron-to-helium flux ratios versus the rigidity.