



Contribution ID: 63

Type: **Oral**

The Alpha Magnetic Spectrometer on the International Space Station

Tuesday 20 June 2023 09:50 (25 minutes)

AMS-02 is a large acceptance magnetic spectrometer operating on the International Space Station since 19th May 2011. AMS-02 has provided precise measurements of the fluxes of individual cosmic ray species in the rigidity range from 1 GV to several TV. The excellent identification capabilities and accurate energy determination are based on a redundant, highly reliable, and flexible design that provides independent and complementary measurements allowing continuous performance optimization throughout its operation in space. These features have proven critical to attaining percent level precision in the measurements of the particle fluxes and the required background rejection in the search for faint signals of new physics in cosmic rays. In this presentation, we will review some of the features that have allowed AMS-02 to provide unprecedented results in the direct measurement of cosmic rays from space.

Eligibility for "Best presentation for young researcher" prize

No

Author: CASAUS, Jorge (CIEMAT - Centro de Investigaciones Energéticas Medioambientales y Tec. (ES))

Presenter: CASAUS, Jorge (CIEMAT - Centro de Investigaciones Energéticas Medioambientales y Tec. (ES))

Session Classification: Direct High-Energy Cosmic Ray Measurements (Space and balloon-borne)

Track Classification: Instrumentation and missions for direct high-energy cosmic ray measurements in space