

Solar Energetic Particles (SEP), Solar Modulation and Space Radiation: New Opportunities in the AMS-02 Era

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Ion Flux Measurement with the AMS-02 Experiment

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The Alpha Magnetic Spectrometer (AMS-02) is a state-of-the-art particle physics detector operating as an external module on the International Space Station (ISS) since May 2011. One of the key characteristics of AMS-02 is its capability to measure the relative abundances and absolute fluxes of the nuclear components of galactic cosmic rays in the kinetic energy range from 1 GeV/n to few TeV/n, from hydrogen up to iron ($Z = 26$) and above.

In this contribution, I will review the recent results from AMS-02 on cosmic ray nuclei heavier than Helium. Preliminary results for the fluxes of lithium, boron and carbon will be presented, as well as for their flux ratios. These measurements are important observables to better understand the propagation and acceleration of cosmic rays in the galaxy. The measurement of the fluxes spectral index dependence with rigidity will also be presented.

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