Contribution ID: **642** Type: **Talk**

Precision Measurement of the Monthly Boron, Carbon and Oxygen Fluxes in Cosmic Rays with the Alpha Magnetic Spectrometer on the International Space Station

Tuesday 28 July 2020 19:50 (25 minutes)

Cosmic Rays (CR) inside the Heliosphere are subject to the effects of the Solar Modulation, resulting from their interaction with the solar wind and with the interplanetary magnetic field. These effects are strongly related to the solar activity and lead to a temporal variation of the cosmic ray intensity near Earth for rigidities up to few tens of GV. Previous AMS results on proton and helium spectra showed how the two fluxes behave differently in time. To better understand these unexpected results, one should therefore study the next most abundant species such as carbon, oxygen, and boron.
In this contribution, the precision measurements of the monthly boron, carbon and oxygen fluxes for the period from May 2011 to May 2018 with Alpha Magnetic Spectrometer on the International Space Station are presented. This period covers the ascending phase of solar cycle 24 together with the reversal of the Sun' s magnetic field polarity through the maximum. The detailed temporal variations of the boron, carbon and oxygen fluxes are shown up to rigidities of 60 GV. The time dependence of the B/C, B/O and C/O fluxes ratios are also presented.

Secondary track (number)

Author: TIAN, Jian (Universita e INFN, Perugia (IT))

Presenter: TIAN, Jian (Universita e INFN, Perugia (IT))

Session Classification: Astro-particle Physics and Cosmology

Track Classification: 08. Astro-particle Physics and Cosmology