Contribution ID: **44** Type: **oral**

Hybrid origins of the cosmic-ray nuclei spectral hardening at a few hundred GV

Wednesday, 27 October 2021 10:30 (20 minutes)

Many experiments have confirmed the spectral hardening at a few hundred GV of cosmic-ray (CR) nuclei spectra, and 3 general different origins have been proposed: the primary source acceleration, the propagation, and the superposition of different kinds of sources. In this talk, I will report some new findings from the AMS-02 nuclei spectra of B and its dominating parents species (C, N, O, Ne, Mg, and Si): the nuclei spectral hardening in a few hundred GV should have hybrid origins. Besides the propagation origin, the superposition of different kinds of sources are also needed for different kinds of the CR primary nuclei species. All these results can be further confirmed by more precise CR nuclei spectra data in high rigidity regions (like that from DAMPE), and could provide us an opportunity to improve the current CR models.

Please choose the session this abstract belongs to

Cosmic rays

Primary author: Dr NIU, Jia-Shu (Shanxi University)

Presenter: Dr NIU, Jia-Shu (Shanxi University)

Session Classification: Session 2