

# New Properties of Neon, Magnesium, Silicon, and Sulfur Primary Cosmic Rays observed by the Alpha Magnetic Spectrometer on the International Space Station

*Tuesday 28 July 2020 19:00 (25 minutes)*

Neon, Magnesium, Silicon, and Sulfur nuclei in cosmic rays are thought to be mainly of primary origin, they are mainly produced and accelerated in astrophysical sources. We report the latest precise measurements of the Ne, Mg, Si, and S individual spectra in the rigidity range from 2 GV to 3 TV by the Alpha Magnetic Spectrometer based on the data collected during its first 7 years of operation. Unexpectedly, compared with the spectra of light nuclei Helium, Carbon, and Oxygen, the spectra of heavy nuclei Ne, Mg, Si, and S show distinctly different new properties.

## Secondary track (number)

**Author:** YAN, Qi (Massachusetts Inst. of Technology (US))

**Co-authors:** CHOUTKO, Vitaly (Massachusetts Inst. of Technology (US)); OLIVA, Alberto (Universita e INFN, Bologna (IT)); PANICCIA, Mercedes (Universite de Geneve (CH))

**Presenter:** YAN, Qi (Massachusetts Inst. of Technology (US))

**Session Classification:** Astro-particle Physics and Cosmology

**Track Classification:** 08. Astro-particle Physics and Cosmology