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Precision Measurements of the Cosmic-Ray Composition

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Several experiments: AMS, ATIC, CREAM, PAMELA, etc., equipped with state-of-the art detectors, have recently presented or are going to present new results on the composition of the charged cosmic radiation with a significant improvement in statistics and systematics respect to existing data. From the energy spectra of antiparticles to the chemical composition and energy spectra of nuclei, these measurements have opened a new era of precision studies in cosmic rays that challenge our current understanding of cosmic-ray sources and acceleration and propagation mechanisms in the Galaxy. In this talk we will review these experiments and present their most recent scientific results.