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Measurement of the cosmic ray spectrum with the Pierre Auger Observatory

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The Pierre Auger Observatory is the world's largest detector for extensive air showers initiated by cosmic rays with energies above 0.3 EeV. Equipped with 1660 water-Cherenkov stations, the surface detector array spans an area of 3000 square kilometers. The combination with 27 fluorescence telescopes, which overlook the atmosphere and measure the calorimetric energy allows for a hybrid detection. The all-sky flux of cosmic rays is obtained by combining four independent data sets. The surface detector array provides three data sets, two formed by dividing the data into two zenith angle ranges, and one obtained from a nested, denser detector array. The fourth measurement is obtained with the fluorescence detector. In this talk, the spectral features are discussed in detail and the systematic uncertainties are addressed.

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